ANNUAL PUBLIC HEALTH AND VACCINATION REPORT

OF THE

PROVINCE OF ORISSA

FOR THE YEAR

1940

BY

Lt.-Col. G. VERGHESE, C.I.E., I.M.S.,
Director of Health and Inspector-General of Prisons, Orissa.

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ORISSA GOVERNMENT PRESS
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CONTENTS.

Annual Public Health and Vaccination Report of the Province of Orissa for the year 1940.

CHAPTER I.

Vital Statistics.

1. **Area and population.**—The total area of the Province of Orissa is 32,206 square miles and the population according to the census of 1931 is 8,009,559 excluding the Orissa States. The average population per square mile is 249. The birth and death rates and also the other returns shown in this report have been calculated on the census population of 1931 and relate as in the previous year only to a population of 7,073,697 which exclude the population of large areas of Ganjam and Koraput districts called the " Agency Areas ", where there is no arrangement for collection of vital statistics.

2. **Provincial birth and death rates.**—The provincial birth rate for the year 1940 was 35·85 per mille as against 34·92 in 1939 and 33·76 in 1938 and the death rate was 24·72 in 1940 as against 28·18 in 1939 and 29.49 in 1938. Thus the birth rate in 1940 showed an increase by 0·93 and the death rate a decrease by 3·46 over the previous year's figures. The gradual improvement in the vital occurrences is as already stated in the previous year's report probably due to lower incidence of malaria and cholera and better agricultural production in the province.

The total number of births in the province registered during the year was 253,568, the number of males being 130,772 and females 122,796 as against 247,008 in 1939. This means an increase of 6,560 births or 0·93 per mille of population during the year over those recorded in the year preceding.

3. The statement below shows the comparative figures of birth rates in the other provinces of India and in Burma during the year 1940 :—

Provinces.	Birth rate per mille of population.
Orissa	35·85
Bengal	33·70
Bihar	30·80
United Provinces	34·72
Central Provinces	37·58
Punjab	40·62
Bombay	42·07
Madras	38·65
Burma	34·97
Assam	28·21
North-West Frontier Province	29·87
Sind	21·15

Orissa recorded a lower birth rate than Central Provinces, Punjab, Bombay and Madras and a higher birth rate than all the other provinces.

4. **Birth registration.**—The highest birth rate 44·68 was recorded in the Angul subdivision of Cuttack district and lowest birth rate 10·58 in the Agency areas of Ganjam and Koraput districts. The reason for such a low rate in the Agency areas was as already stated in the report of the last year partly due to the endemic condition of certain diseases such as malaria, Yaws and venereal diseases reducing the fertility rates of the population and also partly due to many omissions in the original recording of vital statistics.

In the urban areas the municipalities of Berhampur, Parlakimedi and Cuttack registered high birth rates, viz., 44·50, 35·47 and 34·15 respectively whilst the municipalities of Balasore, Jajpur and Sambalpur registered low rates, viz., 17·09, 21·17 and 22·97 respectively.

It appears that some defects previously noticed in the recording of vital events in Cuttack town have been removed with the transfer of responsibility for recording vital statistics from the police to the municipality. It is expected that matters will gradually improve in the municipalities of North Orissa which have provided for registration of births and deaths within their limit in accordance with the provisions of the Bengal Birth and Death Registration Act of 1873, as well, especially those that employ Health Officers with the necessary subordinate public health staff.

The rural and urban areas of the province recorded respectively 246,568 and 7,000 births, the birth rates for these areas being 35·96 and 32·29 respectively per mille of population as against 35·19 and 26·31 respectively in the year 1939. The higher birth rate in the rural area is attributed mainly to social costoms such as early marriage and anxiety to get children and also partly to better health in the rural areas due to absence of congestion. The comparative increase in the urban birth rate is probably due to more accurate recording of vital events consequent on the transfer of the responsibility for recording of such events, from the police to the municipal authorities.

5. **Deaths.**—The total number of deaths registered in the province during the year under report was 174,853 of which 87,658 were males and 87,195 were females as against 199,312 in the previous year. Out of these the rural areas recorded 169,535 and the urban areas 5,318 deaths. There was thus a decrease of 24,459 deaths or 3·46 per mille of population over those recorded in the preceding year. The provincial death rate for the year 1940 was 24·72 as against 28·18 in the year 1939.

The statement below shows the comparative figures of deaths in the provinces of India and Burma :—

Provinces.	Death rate per mille of population.
Orissa	24·72
Bengal	22·26
Bihar	19·10
United Provinces	21·78
Central Provinces	30·30
Punjab	23·70
Bombay	27·91
Madras	24·96
Assam	17·20
North-West Frontier Province	21·60
Sind	13·77
Burma	26·21

Orissa recorded a lower death rate than Central Provinces, Bombay Madras and Burma and a higher death rate than all the other provinces.

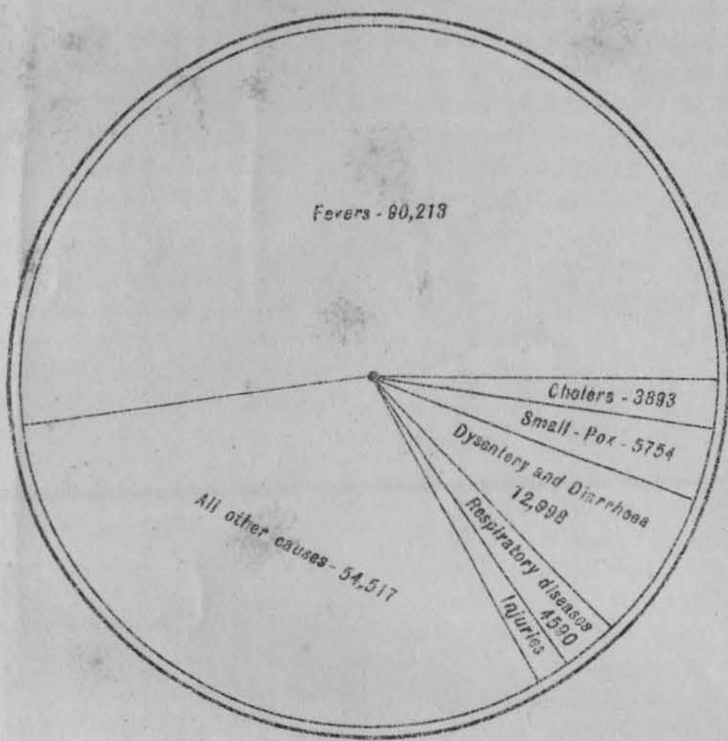
6. **Death registration.**—The highest death rate was recorded in Khandmals, namely 31·19 whilst the lowest death rate was recorded in the Agency districts, the figure being 8·96. Amongst the towns in the province the highest death rate was recorded in Puri (36·73) and the lowest in Jajpur (13·21).

The low death rate recorded in some towns is undoubtedly due to incorrect

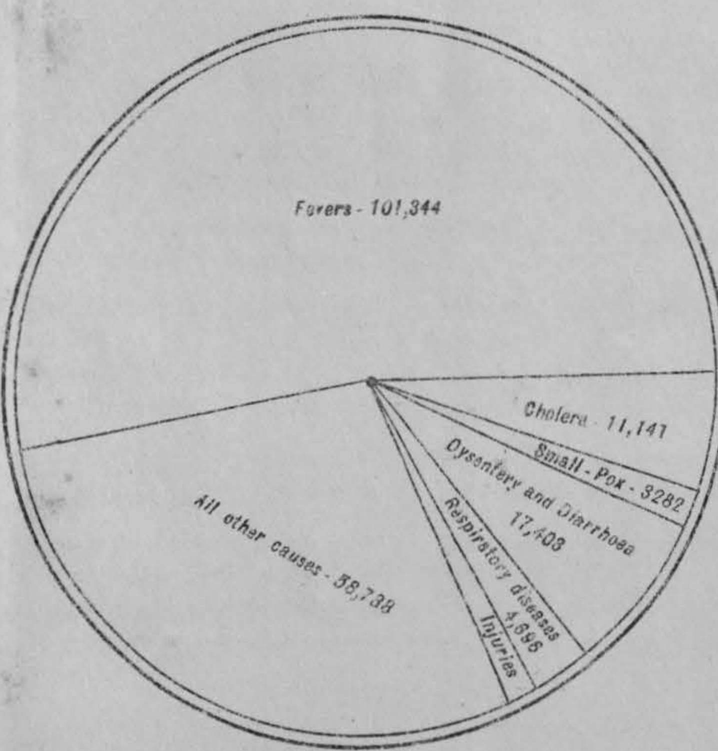
CHART No. I

COMPARATIVE DIAGRAMS OF DEATHS BY CAUSES

FOR THE YEARS 1939 AND 1940



Year 1940 Total Deaths 174,853



Year 1939 Total Deaths 199,312

The low death rate recorded in some towns is undoubtedly due to incorrect recording. It is hoped that the manicipalities concerned will take necessary steps to improve the recording of vital events.

The average death rate in the rural areas was 24·72 and in the urban areas 24·53. The rural death rate was thus slightly higher than that of the urban areas by 0·19. There was an increase of 78,715 births over deaths in the province during the year against an increase of 47,696 births over deaths in 1939, the rate of increase per mille being 11·13 against 6·3 in 1939.

7. **Mortality according to age, class and sex.**—87,658 males and 87,195 females died in 1940 with a death rate of 26·04 for males and 23·52 for females against 99 611 males and 99,701 females with a death rate of 29·59 for males and 26·89 for females in the previous year. 46,426 deaths were recorded amongst infants under one year of age during the year 1940. The mortality rate of infants under one year of age was 189·85 for males and 175·89 for females with the total infant mortality rate of 183·09 per mille of births registered as against the corresponding total of 197·47 in 1939.This lower infant mortality rate is probably partly due to the same reasons as for the general lower mortality figures in the province and partly due to improved knowledge of the people with regard to sanitation, proper care of the expectant mother and the child and etc. There was as usual considerable difference in the death rate amongst the different classes of community. The death rate was highest amongst the Hindus (25·24) and lowest among other classes (10·34). The death rate among Muhammadans was 23·95 and among Christians 14·33.

8. **Verification of registration of vital occurrences.**—As already stated in the previous year's report registration of vital occurrences is compulsory in the municipal areas only and in the rural areas it is not compulsory except in some villages of the Ganjam plains. No staisfactory progress has yet been made to ensure accuracy in the collection and compilation in vital statistical figures in the rural areas. The old method of reporting occurrences of vital events through the illiterate village headmen in South Orissa and the Police chaukidars in North Orissa still exists. A scheme for a thorough and complete registration of vital occurrences in the province is under consideration of Government. No method for the correct and complete reporting of vital occurrences is however expected to yield statisfactory results until and unless every district is provided with an adequate health organisation in which respect the North Orissa districts are particularly wanting. Attempts are, however, being made by the Public Health staff for the detection of the omissions in the reporting of vital occurrences particularly with regard to births.

The accuracy of 92,977 vital occurrences was investigated in the compulsory areas and verified by the public health and vaccination staff and officers of the department. 865 omissions were detected, 53 prosecutions were instituted and 21 convictions were obtained.

In the non-compulsory areas 15,491 vital occurrences were verified by the public health and vaccination staff.

9. **Publication of vital statistics.**—The weekly publication of vital occurrences for all the municipal towns with a population of over 30,000 continued as usual. Weekly epidemic reports of all the districts showing attacks and deaths from principal diseases such as cholera and smallpox were published in the *Orissa Gazette*.

With the increasing interest taken by all the local bodies in the proper and complete recording of vital occurrences in their respective areas, the collection of the figures has appreciably improved in the urban areas, and it is hoped to make the publication of vital statistics a real educative factor for the benefit of all concerned. With that end in view efforts are being made to improve the system and the methods of recording these vital events in the life of the Province.

CHAPTERS II and III.

State of public health in the province and history of chief diseases—Epidemiology.

Incidence of chief diseases.—The incidence of deaths from the chief diseases during the year under report, compared with that for the previous year is shown in the Chart. The statement below shows the mortality ratio per 1,000 of population from those diseases in the year 1940 :—

	Urban.	Rural.	Combined.
Cholera	0·47	0·55	0·55
Smallpox	1·37	0·80	0·81
Fevers	7·25	12·93	12·75
Dysentery and diarrhoea	2·66	1·81	1·84
Respiratory diseases	2·10	0·60	0·65
Injuries	0·34	0·41	0·41
All other causes	10·34	7·62	7·71
Total	24·53	24·72	24·72

The death rate is found to have decreased from 28·18 per mille of population in 1939 to 24·72 in 1940. The deaths were as usual chiefly due to " fevers ", under which the rate was 12·75 against 14·33 in the preceding year.

The death rates from cholera, fever and injuries were lower but those from smallpox, dysentery and diarrhoea and respiratory diseases were higher in the urban areas than those in the rural areas. The higher death rate from dysentery and diarrhoea was mainly attributed to the bad state of water-supply and defective or even in places the absence of proper disposal of refuse matters and that from the respiratory diseases to congestion and the vitiated atmosphere of the towns and the poor housing conditions of a vast majority of the people.

2. **Cholera statistics.**—The death rate from cholera decreased from 1·58 per mille of population in 1939 to 0·55 in 1940. The highest incidence of the disease was recorded for the first time since the formation of the province in the district of Koraput the death rate being 1.58. This comparatively abnormal rise was apparently due to the opening up of the district for easier communication than before, resulting in the infection being carried to the virgin soil where hygienic conditions are also far from satisfactory in most of the chief centres of population. The incidence of cholera was also fairly high in the districts of Balasore, Puri and Cuttack, the death rates being 0·98, 0·68 and 0·66 respectively. Amongst the towns, Parlakimedi and Balasore reported comparatively higher death rates, viz., 2·74 and 0·95 respectively. This, no doubt, is indirectly due to poor sanitation and unsatisfactory water-supply in these towns.

3. **Cholera in the province.**—The province recorded a considerable reduction in the incidence of cholera during the year, the total number of death from this disease in the province being 3,893 against 11,141 in the previous year. The districts of Cuttack, Balasore, Puri, Ganjam plains and Sambalpur recorded respectively 1,443, 974, 700, 570 and 120 deaths. The death figures from the disease recorded in Koraput, Ganjam Agency, Khondmals and Angul were comparatively low, being 44,42, 12 and 4 respectively.

In the districts of Cuttack, Puri and Balasore the epidemic which started in the previous year continued for the first 3 to 4 months of the year after which it gradually subsided. Only sporadic cases were reported in the latter

half of the year although there was a slight increase in the figures in these districts towards the end of the year.

In Ganjam plains cholera first appeared in February and continued practically till the end of December. The disease assumed a mild epidemic form and continued as such in this district almost throughout the latter half of the year. From Ganjam plains the epidemic spread to the Agency areas of Ganjam and Koraput districts although the number of deaths in these areas were comparatively small.

In the district of Sambalpur cholera appeared in a mild epidemic form in the month of August, but subsided soon after in September.

The other parts of the province, viz., Angul and Khondmals were almost free from cholera during the year.

The following table will show the distribution of cholera in the province month by month during the year 1940:—

Month.	Number of deaths.
January	1,219
February	700
March	387
April	120
May	66
June	43
July	84
August	124
September	196
October	286
November	448
December	220
Total	3,893

The recurring epidemics of cholera, enteric fever and other bowel diseases occurring in the rural areas which account for a large number of deaths every year are undoubtedly chiefly attributable to a very unsatisfactory state of drinking water-supply in the rural areas of the province. The people mainly depend on open streams, tanks, canals, shallow ring wells, etc., for their drinking water and for other domestic purposes. These sources of water-supply are easily liable to contamination and infection. They always remain polluted and practically become potential sources of infection and spread the disease when any epidemic breaks out in the locality.

It is in the circumstances very desirable to devise ways and means to successfully tackle the problem of rural water-supply by improving or replacing the existing ones where necessary as these dangerous sources on which the villagers in the rural areas depend are no better than a perennial source of sickness and mortality among rural folks through various diseases attributable to defective and bad drinking water and for which the Government and the local bodies concerned have to spend large amounts of money for their prevention and control.

Grants are made every year for the improvement and adequacy of rural water-supply by the local bodies and from the Rural Development Fund but the money spent over such measures is not spent judiciously or scientifically

as a result of which the rural water-supply ultimately turns out to be a constant source of nuisance. The money is more often expended in the excavation of open tanks or shallow ring wells without obtaining expert opinion of the Public Health Department. I, therefore, reiterate that a proper co-ordination of efforts on the part of all concerned is highly necessary for evolving proper methods of supplying sufficient and wholesome water for drinking purposes in the rural areas.

I may, however, note in this connection that the Government have already realised this fact and have taken action with a view to bring about considerable improvement in this respect.

4. **Cholera preventive measures.**—The usual method of preventive measures for the control of the cholera epidemic was adopted by the local bodies concerned, viz., inoculation against cholera and disinfection of water sources, disinfection of excreta, etc., of the infected houses and educative propaganda by Public Health lectures with and without the aid of magic lantern, distribution of pamphlets, etc. Besides the permanent staff, the local bodies concerned appointed temporary additional staff from their own fund. Wherever the staff employed by the local bodies was considered inadequate to cope with the situation, temporary doctors and Health Inspectors were appointed and detailed by the Public Health Department to supplement the Public Health staff of the local bodies. A free supply of 2,60,900 doses of cholera vaccine and 6,555 phials and 1,000 ampoules of cholera bacteriophage at an approximate cost of Rs. 5,600 and Rs. 2,456 respectively was also made by this Department to the local bodies concerned.

5. **Smallpox.**—Smallpox is nearly as dangerous as cholera in the province, prevailing in an endemic form and assuming epidemic proportions at definite intervals. Cases of smallpox were reported as usual throughout the year. The total number of deaths recorded from this disease during the year was 5,754 or 0·81 per mille of population against 3,282 or 0·47 per mille of population in the previous year.

The following table will show the distribution of smallpox in the province month by month during the year :—

Month.	Number of deaths.
January	511
February	843
March	964
April	728
May	715
June	446
July	379
August	268
September	169
October	154
November	195
December	382
Total	5,754

The highest number of deaths was recorded in the district of Cuttack there being 3,634 deaths as against 2,645 in the previous year. The death, rate was 1·67 against 1·22 in the previous year. The disease was also prevalent

in an epidemic form in the districts of Puri, Balasore and Sambalpur and in Ganjam plains. The number of deaths in these districts being 651, 417, 268 and 626 or 0·63, 0·42, 0·25 and 0·49 per mille of population respectively against 140, 291, 54 and 140 or 0·13, 0·29, 0·05 and 0·11 per mille of population in the previous year. Among the towns, Cuttack, Sambalpur and Berhampur reported the highest death rate, viz., 2·70, 2·13 and 1·54 respectively, As in the previous year the urban areas suffered more than the rural areas, the death rates per mille of population being 1·37 in the urban areas and 0·80 in the rural areas. The year 1940 appears to have coincided with the peak year of the usual five year epidemic cycle of the disease in this province.

The epidemic continued from the previous year and was at its height up to the end of May after which it gradually came down in the latter part of the year.

The system of vaccination in the province during the year was the same as in the previous year.

In South Orissa in the Ganjam plains (including the municipalities of Berhampur and Parlakimedi) both vaccination and revaccination are free and compulsory. In the Agency areas of Ganjam and Koraput both vaccination and revaccination were free but not compulsory. In North Orissa primary vaccination alone was compulsory in the municipalities and in the district of Puri. North Orissa municipalities employ paid vaccinators and vaccination is done free at the depots and small fees are charged for home vaccination. In Puri district vaccination is carried on by licensed vaccinators who perform free vaccination at the depots and charge a fee of annas two for each successful vaccination done at home which they take as their remuneration. In other parts of North Orissa vaccination was not compulsory and the work was carried on by the licensed vaccinators. On account of the fact that vaccination was not compulsory in the rural areas of the districts of Cuttack, Balasore and Sambalpur, a large number of persons inevitablly remained unprotected becuase of the absence of any provision in the law to enforce it and people's inability or disinclination to pay the vaccinators' fee. These factors contributed mainly to the prevalence of the disease throughout the year in the three districts mentioned above because the majority of the population either remained protected or partially protected.

The scheme for making primary vaccination compulsory in the districts of Cuttack and Balasore has since been approved by Government and given effect to from July 1941. It is hoped that with the introduction of this scheme the state of vaccination in the province will appreciably improve. With a view to achieve satisfactory results and to tackle the serious problem of smallpox in the province successfully Government have been moved to make revaccination at certain age periods compulsory and the question of having a separate Vaccination Act making both primary and revaccination compulsory for the province as a whole, is under consideration of Government. A case in point is in Puri district where primary vaccination alone is compulsory since 1933 where there was a fairly heavy incidence of smallpox during the year under report, and it was mostly confined amongst the adults who have passed the period of immunity afforded during their childhood by primary vaccination.

In the Khondmals Agency in the district of Ganjam the system of carrying out free vaccination by paid vaccinators was continued during the year with the sanction of Government and the result obtained was very satisfactory and encouraging. The incidence of smallpox in that area has been reduced to the minimum, the death rate being 0·01 in 1940 against 0·01 in 1939, 0·1 in 1938 and 1·6 in 1937.

Vaccine lymph worth Rs. 8,106 was purchased by Government from the Vaccine Depot of the Government of Bihar at Namkum and was supplied free of cost in the province for vaccination. 747,177 vaccination operations were performed during the year against 689,879 during the previous year. Of these 234,802 were primary cases and 512,875 revaccinations.

6. **Plague.**—No case of plague was reported in this province during the year under report. All necessary measures were, as usual, taken at the port of Gopalpur to prevent the introduction of this disease into this province through sea from Rangoon which maintains a direct and constant shipping traffic with Orissa through its port Gopalpur.

7. **Dysentery and diarrhoea.**—Dysentery and diarrhoea were much less in the province during the year as compared with those of the previous year. There were 12,998 deaths from this group of diseases in 1940 against 17,403 in 1939 and the mortality rate was 1·84 per mille of population against 2·46 in 1939. As usual, the districts of Cuttack and Puri recorded high death rate viz., 3·02 and 2·69 respectively. Among the towns, Puri (4·60), Parlakimedi, (4·38), Berhampur (2·23) and Sambalpur (2·73) reported high death rates.

The epidemiology and the high incidence of this group of diseases in this province have probably as previously reported, got some relationship with high humidity in the low-lying coastal districts where they are most common To a large extent it is without doubt like cholera, directly associated with the inadequate and bad state of drinking water-supply and defective sanitation especially in regard to the disposal of human filth in the rural and to a lesser extent in the urban areas of these tracts. Fly nuisance, which is closely associated with unhygienic and insanitary conditions, was found to be another potent source of danger in the dissemination of the disease notably in the towns mentioned above. The recurring floods also play, no doubt, an important part in bringing about such a bad state of sanitation and also a combination of other injurious circumstances in the coastal districts. Want of proper nutrition specially brought about by the flood condition and consumption of stale food stuffs by thousands in the villages also play a great role in the prevalence of the disease.

The figures from this group of diseases reported from the district of Balasore which suffered from high floods very badly may be explained as due to complete flushing of the polluted water sources and a very high dilution of the contaminated water.

A careful study of these facts relating to bowel diseases would indicate that the chief measures for its mitigation and even prevention is the provision of adequate and wholesome water-supplies for drinking and propagation of the correct sanitary sense among the poeple in the rural areas.

8. **Respiratory diseases.**—4,590 deaths were recorded from respiratory diseases during the year giving a mortality rate of 0·85. Deaths from pneumonia and pulmonary tuberculosis, which are included among those from respiratory diseases, probably, claim quite a big percentage of total deaths recorded under this cause. In this connection it may be said that the Provincial and District Tuberculosis Associations are making attempts to organise a campaign against tuberculosis in the province, and towards that end in view preliminary arrangements for the establishment of a provincial tuberculosis clinic at the headquarters station of the province, viz., Cuttack, on the lines advised by Dr. F. Muller, the Tuberculosis Commissioner for India, were made. Plans and estimates for the construction of the buildings were prepared and approved. The construction work, the cost of which will be entirely met from the funds of the Provincial Tuberculosis Association, has since started. The proposal to meet the entire charge of maintenance of the clinic which is estimated to be about Rs. 8,500, which includes the pay of a Provincial Tuberculosis Officer and three Health Visitors has also since been approved by Government and necessary funds have been provided in the Provincial Budget for the year 1941-42. It is hoped that the Central Clinic will begin to function on complete and regular lines soon with the re-opening of the building. It is expected that this clinic will serve as a foundation on which all future developments of tuberculosis schemes in the province will depend.

Although district association have been formed in 4 out of the 6 districts of the province and affiliated to the previncial association, real tuberculosis work has not been started in anp of them expect in Ganjam district where

the local association has raised some funds and is utilising the same in tuberculosis propaganda work. The district associations so far affiliated are looking forward to the establishment of the Central Clinic at Cuttack for inspiration, guidance and help.

During the year the provincial association continued to maintain the lady Health Visitor for home visiting in the houses of the patients within the municipal area of Cuttack. In the course of her visit she detected 90 cases of pulmonary tuberculosis in the town of whom 29 died during the year; 4 cases were sent to the hospital for treatment. In the absence of sufficient facilities for the treatment of tuberculosis cases, suitable steps could not be taken for the treatment of such cases detected by the lady Visitor. Necessary advice and instructions were however given to their families regaring isolation, prevention of spread of the disease, care of contacts, etc.

A booklet dealing with the causation and prevention of tuberculosis with coloured illustrations was prepared for the general use of the public especially of the schools and the colleges and is now under print both in English and Oriya. A few copies of this book in Telugu are also being printed. Pamphlets, posters, and leaflets are also being prepared for wide circulation with a view to deffuse a correct elementary knowledge of the disease. 820 lectures on tuberculosis were delivered through the health staff employed under Government and the local bodies of the province. Steps have also been taken for the examination of tuberculosis amongst the cattle maintained by the municipality, dairy farms and jails with a view to find out the extent of infection and to prevent the spread of the infection from catle to human beings.

CHAPTER IV.

Fairs and Festivals.

A large number of *melas* are held every year in different parts of the province. Most of these *melas* are only of local interest and are attended by the people of the locality where they are held.

The most important and famous among these *melas* are the Snan, the Car and the Return Car festivals held at Puri. These festivals attract a large number of pilgrims from all parts of India. During the year under report these festivals were held on the 19th of June and the 7th and the 15th of July respectively and were attended by about 6,500, 28,000 and 24,600 pilgrims respectively as against about 45,000, 65,000 and 70,000 pilgrims respectively in the previous year. The rush of pilgrims, it appears, was far less this year due undoubtedly to heavy rainfall continuously accompanied by high flood and breach in the railway line resulting in the stoppage of railway traffic at the time of the Car and the Return Car festivals. Most of the pilgrims as usual stayed in the Dharmasalas and the lodging houses of the town. A large number of Sadhus and beggar pilgrims camped on the roadside. Some found their shelter with friends and a very large number amongst them arrived and returned on the same day.

Special sanitary arrangements were made for the festival period from the 18th June to 18th July 1940. Eleven Sub-Assistant Surgeons and a Special Health Inspector were deputed for special duty by the Medical and the Public Health Departments. The services of the Medical Officer in charge of the Puri Leper Colony and the municipal Medical Officer attached to the Puri Pilgrim Hospital were also utilised for the purpose.

Besides the above superior staff the municipality and the Lodging House Committee appointed extra temporary staff consisting of 1 conservancy jamadar, 2 sardars, 40 coolies and 276 sweepers over and above the regular conservancy staff of the municipality.

For efficient and better sanitation, double conservancy service both morning and afternoon was arranged. Temporary latrines and urinals were put up at important places where pilgrims congregated.

A preliminary chlorination of all private wells numbering 1,835 was, as usual carried out immediately before the commencement of the festival period. All unsafe public wells including those of the Dharmasalas, lodging houses and hotels were cleaned out and over chlorinated in order to discourage their use. The public pipe-water-supply was chlorinated as an extra measure of safety before the festival period and a constant suply of pipe water was made throughout the twenty-four hours during the festival period from the 18th June to the 18th July 1940. The sacred tanks were disinfected as best as possible and as circumstances demanded and the people were prohibited from collecting water from them for drinking purposes. All the licensed lodging houses had water pipe connections as in the previous year, as it is a compulsory provision precedent to the issue of license.

Arrangements, as usual, were made through the respective health authorities of the Bengal-Nagpur Railway and the Puri District Board to treat the sources of water-supply with bacteriophage at the railway stations in the district of Puri and along the Jagannath Trunk Road including the pilgrim centres at Sakhigopal and Bhubaneswar. A vigilant watch over the food stuffs offered for sale was kept by the Medical Officers placed in charge of the different wards and immediate action was taken against the offenders when their foods were found unwholesome, adulterated or contaminated with dust and flies.

Unfortunately the sanitary staff have no control over the storage and sale of *mahaprasad* prepared in the temple which is the main food supply for the pilgrims in Puri. It is desirable that the municipal Health Officer should supervise and control the storage and sale of *mahaprasad* without in any way interfering with the religious sentiments of the temple authorities.

Altogether 48 sporadic cases of diarrhoea were reported and isolated in the Cholera Hospital. Thirty-three of these cases were clinically diagnosed as cholera. Of these again 18 were residents and 15 were pilgrims. Four of these cases turned fatal. Many of these cases were most probably the maifestation of gastro-intestinal trouble due to fatigue of the long journey, irregular diet and unsettled living.

Anti-cholera inoculations were pushed through and 25,067 persons (7,267 residents and 17,800 pilgrims) were inoculated and certificates for inoculation were issued to them. Propaganda was carried out by means of lectures delivered with and without demonstrations of magic lantern slides, leaflets and posters on preventive measures against cholera. Circular letters were issued from this office to all concerned in regard to the various measures to be taken to prevent an outbreak of any serious infectious disease, especially cholera.

The Puri Seva Samity, the Bharat Yubaka Sangha, Puri, and the Hindusthan Scout Association, Puri, rendered very helpful social service to the pilgrims during the festival period.

Thanks are due to these volunteer organisations for their very willing assistance and valuable services in the interest of the pilgrims and the public. I visited Puri a few days before the festival period and discussed with the Chairman and the Commissioners of the Puri Municipality regarding the proposed arrangement and gave necessary instructions and advice. I also met the temple priests and the vendors and advised them regarding proper ways of keeping food stuffs and general sanitation. I again visited the place during the festival period to see the arrangements made. The Assistant Director of Public Health remained there for about a week to see to the details of the sanitary arrangements. The District Magistrate and the Civil Surgeon were also in close touch with all the arrangements.

Of the other important *melas* mention may be made of the Chandaneswar *mela* in the district of Balasore. This *mela* is held every year in April and is attended by about 40,000 people. This year the *mela* was held from the 8th to the 14th April. Necessary sanitary arrangements were made by the Public Health staff of the Balasore District Board. 4,000 inoculations against cholera were carried out. No case of cholera or any other infectious disease was reported.

CHAPTER V.

Urban Sanitation.

There are eight municipalities in the province with a total population of 216,806 according to the census of 1931.

Medical Officers of Health have been employed in the three larger municipalities of the province, viz., Cuttack, Puri and Berhampur. Two of them for Cuttack and Puri are first class Health Officers and the other one for Berhampur is a second class Health Officer with L.P.H. qualification. They all belong to the Government Public Health cadre, and draw pay from the provincial revenue. The municipality of Kendrapara is continuing to maintain at its own cost a Sub-Assistant Surgeon without any Public Health qualification as its Health Officer since 1939.

The remaining four municipalities of the province, viz., Balasore, Jajpur, Sambalpur and Parlakimedi go without a Health Officer. The municipality of Parlakimedi has long agreed to appoint an L.M.P. with L.P.H. qualification as its Health Officer, Government meeting half the cost of his pay; but as a suitable candidate was not available, the appointment has not yet been made. Qualified Health Inspectors have been employed by these four municipalities to look after their sanitation. As has already been pointed out in my last year's report, a Health Officer with Public Health diploma by virtue of his training and education is alone qualified to tackle effectively the various public health problems of a municipality. It is gratifying to note that the public are gradually awakening to the needs of public health and a higher standard of sanitation is being demanded.

It it therefore hoped that the municipalities will see their way to provide for a qualified Health Officer to look after the public health and sanitation of their respective areas.

Anti-malarial operations were carried out in the municipalities of Kendrapara, Puri, Cuttack and to some extent in the municipality of Berhampur (for details please vide page 16).

The Food Adulteration and the Vaccination Acts were, as in the previous year, in force in all the municipalities of the province although the provisions of the Acts were not very strictly enforced by the municipal authorities except in the larger municipalities of Cuttack, Puri and Berhampur where qualified Health Officers have been employed and to some extent in Kendrapara Municipality which employs a Sub-Assistant Surgeon as its Health Officer.

Bye-laws were framed with a view to dealing effectively with nuisances arising out of rice mills that have been or are to be established in the urban areas under sections 195 and 264 of the Bihar and Orissa Municipal Act, 1922, and were circulated among the municipalities for adoption.

The municipalities of Cuttack, Puri and Berhampur had already shouldered the responsibility of recording vital events in their respective areas. During the year under report the municipalities of Balasore, Jajpur and Kendrapara took up this responsibility from the police. It is hoped that the recording of vital events in these municipalities will henceforth considerably improve.

2. **Conservancy.**—A scheme for mechanisation of the conservancy of the Puri Municipality by utilising two night soil motor vans for carrying night soil from depots to the trenching ground has been sanctioned by Government. It is expected that the arrangement to remove and dispose of human excreta as quickly as possible will go a great way in improving the sanitation of the town. A proposal for an efficient under-ground drainage scheme for the town has already engaged the attention of the Government as well as the Puri Municipality.

Defects noted in the conservancy of the municipalities and the union boards are invariably pointed out to the respective municipalities and union boards at the time of inspection with instructions as to how best they could be remedied with the resources available.

During the year under report, sanitary inspection of four towns, besides a number of sanitation committees, union board and panchayat board areas was made by me and the Assistant Director of Public Health. In each case a complete report of the inspection was sent to the local authority concerned and advice given with regard to sanitation and public health measures. It is gratifying to note that attention paid by the local bodies to the recommendations suggested for improvement in the inspection note although instances are not wanting in which recommendations have not met with adequate response especially for financial reasons.

3. **Expenditure on sanitation in Municipal towns.**—The statement below shows the receipts and expenditure for sanitary purposes during the year 1939-40 as compared with those of the previous year :—

Total number of municipalities.	Total receipts including opening balance.		Heads of expenditure.	1938-39.	1939-40.	Percentage of expenditure to the total receipts.	
	1938-39.	1939-40.				1938-39.	1939-40.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
8	10,70,836	9,70,619	Conservancy ..	2,09,733	1,61,318	19·6	16·6
			Drainage ..	28,637	20,918	2·7	2·1
			Water-supply ..	26,522	34,673	2·5	3·6
			Vaccination ..	3,267	3,933	0·3	0·4
			Epidemics ..	7,051	7,633	0·6	0·8
			Markets and fairs ..	4,972	6,681	0·5	0·7
			Other sanitary charges	1,238	436	0·1	0·1
			Public health staff ..	19,350	14,821	1·8	1·5
			Total ..	3,00,770	2,50,413	28·1	25·8

4. **Chief sanitary works in Municipal towns.**—The details of expenditure under this head are dealt with in the report of the Superintending Engineer, Public Health Circle, Bihar, appended.

CHAPTER VI.

Rural Sanitation.

No change was effected in the public health organisation of the various districts of the province during the year under report. The districts of Cuttack (excluding Angul), Puri, Balasore and Ganjam (excluding Khondmals and Agency areas) have each a fully qualified Health Officer and a proper health organisation scheme, which in Ganjam plains is more elaborate and more satisfactory than in the other districts. The Health Officer of the last named district belongs to the Provincial Public Health Service and those of the other three districts are district board servants. Health organisation scheme is in operation also in the Ganjam Agency and in the Koraput district and the Civil Surgeons are in charge of the Public Health administration there. In Koraput the Civil Surgeon is assisted by a second class Health Officer in the performance of his public health duties. There is no health organisation scheme in Sambalpur district. Under the control of the Civil Surgeon there is a Government vaccination inspecting staff consisting of one Inspector and three Sub-Inspectors who attend to vaccination work, and only a very small nucleus of health staff consisting of a few paid vaccinators appointed by the district council to attend to epidemics. Under the new Act for Sambalpur it is hoped to have a better organised public health staff under

a whole-time first class Health Officer, appointed by Government and deputed for service under the board, more or less on the lines similar to what obtains in Ganjam plains. I am to mention that the District Board of Sambalpur has responded satisfactorily to the proposal made by me with regard to the proposed public health organisation of that district.

There were previously one Inspector of Vaccination for Angul under the Civil Surgeon, Cuttack, and one Sub-Inspector of Vaccination for Khondmals under the Civil Surgeon, Ganjam, to attend mainly to vaccination work and only to some extent to the control of epidemic diseases other than samllpox. They were replaced by trained Health Inspectors during the year under report. It is expected that with this improved arrangement the investigation and control of other communicable diseases besides smallpox, education of the public through lectures and propaganda, organisation of maternity and child welfare work, etc., in these areas will generally improve.

Introduction of an efficient health organisation scheme under a qualified first class Health Officer is considered an urgent necessity for every district. Efficient supervision of the work of the subordinate health staff and effective control of epidemics and the development of further important public health measures are not possible in any district without such an organisation.

Compulsory vaccination on licensed system has since been introduced in the rural areas of the districts of Cuttack and Balasore. It has been proposed to introduce compulsory vaccination (both primary and revaccination) under some unified Act for Orissa. It is hoped that the Sambalpur district will soon fall in line with the other districts in regard to the compulsory scheme of vaccination.

No change was effected in the system of registration, collection and transmission of vital statistics in the rural areas during the year under report, which still continued to work unsatisfactorily as before. The Bengal Births and Deaths Registration Act has not been extended to the rural areas of North Orissa and the Madras Birth Registration Act of 1899 has only been extended to some villages of the Ganjam plains.

A scheme for thorough and complete registration of vital occurrences in the province, as has already been mentioned, is under the consideration of Government.

The Bihar and Orissa and the Madras Food Adulteration Acts not being in force in the rural areas, a good deal of adulteration of food stuffs went on as usual in these areas. The Orissa Prevention of Adulteration and the Control of Sale of Food Act which was passed by the legislature has since come into operation in the urban areas of the province. It is proposed to extend this Act to the rural areas of the province as well. The enforcement of the Act in the rural areas, will, it is hoped, provide one of the greatest public health amenities to the people and prohibit the dumping of unwholesome food stuffs in the villages from the urban areas with which the pure local produce of the cultivator could not compete.

Rules framed under the Orissa Nurses and Midwives Act, 1938, which provides for the registration of nurses, midwives and *dais* and precludes unqualified persons from practising midwifery in the rural areas, are under the consideration of Government. When the provisions made under the Act are properly enforced in the rural areas, it will go a great way in diminishing the appalling wastage of infant and maternal life which results from the lack of skilled midwifery practice in the rural areas.

Indiscriminate defaecation near rivers, tanks and other water sources and the consequent grave pollution of such water sources are mainly responsible for the endemic manifestation of bowel diseases in the rural areas, particularly noticed at the beginning of the rains when the polluted soil is washed into them. Hook-worm infection with consequent anaemia and debility which are noticed to be widely prevalent amongst all classes in the rural areas as a serious set back to the economic progress of the province, are also entirely due to gross pollution of the soil with human excreta. It

is, therefore, very necessary that by intensive propaganda the villagers should be persuaded not to defaecate here and there indiscriminately but strictly to use latrines. In order to popularise bore-hole latrines which are cheap, highly efficient and easy to construct, and which require minimum of attention, a few sets of earth borers were purchased by this department and supplied to some of the District Boards of the province for extensive propaganda in rural areas during the year under report.

The innumerable tanks and dobas full of weeds especially pistia are responsible for wide prevalence of malaria and filaria in the rural areas. The local bodies should be equipped with some suitable bye-laws similar to those for water hyacinth for effectively dealing with the cleaning of tanks, etc., of weeds which will go a great way in reducing the incidence of these wasting diseases in the villages.

Skin diseases of various sorts are commonly found among the rural public which are mainly due to unclean habits of the people. Public education only can help in the amelioration of this aspect of public health problem.

A conference of the public health staff of the district of Ganjam was held at the end of the year. This was the first conference of its type in the province. It was opened by me and presided over by the President of the District Board, Ganjam. Public health subjects peculiar to the district were discussed and important resolutions regarding policy and administration were passed in the conference and practical programmes of work were also drawn up.

Bye-laws were framed with a view to dealing effectively with nuisances arising out of rice mills that have been or are to be established in the rural areas, under section 139 of the Bihar and Orissa Local Self-Government Act, 1885, and were circulated among the local bodies concerned for adoption.

The Health Inspectors training class in the Orissa Medical School was re-opened in 1940. A batch of untrained subordinate public health staff employed under the local bodies of the province were given training along with a few outside candidates totalling 24.

2. **Expenditure on sanitation by District Boards.**—The following statement shows the receipts and expenditure of district boards under the principal headings of sanitation :—

Number of District Boards.	Total receipts including opening balance. 1938-39.	1939-40.	Heads of expenditure.	1938-39.	1939-40.	Percentage of expenditure to the total receipts. 1938-39.	1939-40.
1	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.		
6	28,44,403	33,93,090	Conservancy ..	11,496	22,488	0·4	0·7
			Drainage	1,210	595	0·1	0·02
			Water-supply ..	23,335	21,781	0·8	0·6
			Vaccination ..	29,300	20,874	1·0	0·6
			Epidemics ..	2,208	4,190	0·1	0·1
			Markets and fairs ..	9,094	3,971	0·3	0·1
			Other sanitary charges	18,654	1,623	0·7	0·05
			Public health staff ..	75,368	98,423	2·6	2.9
			Total ..	1,70,665	1,73,945	6·0	5·1

CHAPTER VII.

Fevers.

There was a marked decrease in the number of deaths from fevers during the year under report as compared with that for the previous year. The total number of deaths from fevers during the year under report was 90,213 or 12·75 per mille of population as against 101,344 or 14·33 per mille of population in the previous year.

Fever is still the chief cause of mortality in the province. 51·6 per cent of the total mortality from all causes was from fever alone as against 50·8 in the previous year. A number of diseases in which the rise of temperature is a marked symptom continue to be grouped under the general heading " Fevers ". The births and deaths registration being not compulsory in the rural areas and the agency through which vital statistics are collected being not educated or at least not being sufficiently intelligent to correctly ascertain the cause of death, separate figures for deaths caused by different kinds of fevers, viz., malaria, enteric fever, measles, relapsing fever, kala-azar, influenza, typhoid, cerebro-spinal fever, etc., are not maintained ; but there is no doubt that the bulk of deaths from fever is due to malaria.

The high death rates were recorded in Khondmals (27·80), Angul (22·28) and in the district of Balasore (16·21), and amongst the towns Kendrapara (13·31), and Puri (13·52) reported high death rates from this disease as in the previous year.

From the mortality table given below it would appear that turning downward from its previous year's maximum in December 1939, the number of mortality from fever gradually decreased till June after which it steadily rose in the latter half of the year and was again the highest in December. Compared with previous year's figures the mortality under this head was lower in all the months except in December when it was somewhat higher.

Months.	1939.	1940.
January	9,992	9,736
February	8,570	7,149
March	9,192	6,705
April	8,939	7,254
May	7,747	6,686
June	6,577	5,139
July	6,802	6,100
August	9,423	6,698
September	9,483	7,352
October	7,469	7,638
November	8,481	8,898
December	9,667	10,858

Malaria.

Malaria is widely prevalent in the deltaic districts of Cuttack, Puri and Balasore and also in the district of Ganjam along the Chilk Lake and in the Agency tracts of Ganjam and Koraput. To a less extent it is prevalent also in other parts of the province. The remnant collections of flood water in the innumerable tanks, ditches, dobas, etc., in the deltaic areas and seepages in the Agency areas, account for the large number of breeding places of mosquitoes. A good number of water collections in household premises

in the country side and along the road ways are multiplying year after year and practically all these shallow excavations serve as reservoirs of water and thus contribute a potent source for the breeding of mosquitoes. During the year under report the province was, however, comparatively free from malaria.

It is noted that in the districts of Cuttack, Puri and Balasore and in Ganjam plains the incidence of malaria reached its maximum as ususal in the winter months and it was comparatively less prevalent at other times of the year, the minimum being recorded in June or July. In the Agency areas of Ganjam and Koraput as well as in Angul and Khondmals the situation was however different. The maximum incidence of the disease in these areas was also as usual recorded in April or May, the incidence being comparatively less at other times of the year.

Anti-malarial operations in different centres in the district of Koraput were continued during the year under reoprt with satisfactory results.

The anti-malaria scheme worked out at Lakshmanath in the district of Balasore by the Balasore District Board with a Government grant of Rs. 800 sanctioned in the year 1939-40 has resulted in appreciably reducing the number of malaria cases in that area during the year.

The anti-malaria operation carried out in the Kendrapara municipal area by the local municipality with a Government grant of Rs. 1,300 sanctioned in 1939-40 is reported to have reduced the incidence of malaria in that town although it cannot yet be claimed that it has reduced the mosquito nuisance in general as the Culex species of mosquitoes are still freely breeding in the innumerable insanitary ditches, dobas, drains and cess pools that abound in that place. The municipality has been advised to take action under the Municipal Act for clearing these water courses of the weeds that abound in them. Government are considering to give another grant of about Rs. 500 to this municipality during the next financial year for the continuance of the scheme.

Malaria of a severe type broke out in the town of Puri towards the last quarter of the year. On ivestigation it was found that the unusual appearance of malaria in the town was due to the insidious extension of A. Sundaicus which has been breeding in the coastal areas of the Chilka Lake.

An anti-malaria scheme prepared by the Assistant Director of Public Health and the Civil Surgeon, Puri, was in operation in Puri town since the 25th October 1940 and was continued upto the end of February 1941. Very vigorous operations in and around the town helped considerably to reduce the incidence to a negligible extent. I am glad to state that the municipal authorities and the Khasmahal authorities co-operated wholeheartedly in dealing with the anti-malarial operations in the town.

Anti-malarial work was also to some extent carried out in the municipalities of Cuttack and Berhampur during the year.

The field unit from the Malaria Institute of India based at Rambha in the district of Ganjam continued its investigation along the Chilka Lake coast. Very interesting results have been obtained by the research unit during the year.

The Malaria Unit of the Government of Orissa shifted its activities from Rambha to Puri to cover a wider range of affected places in the district.

Sale and free distribution of quinine.—The district boards concerned made some provision in their public health budget for the purchase and the free distribution of quinine in the malarious areas. Indents for medical stores of all hospitals and dispensaries in the province were also scrutinised by me in order to ensure that a fair proportion of the grant for the purchase of medicines, drugs, etc., is spent in the purchase of quinine and other cinchona products.

In order to popularise quinine in the rural areas necessary provision was as usual made in the provincial budget for the purchase and sale of quinine through post offices and other vendors. A provision of Rs. 3,950 was made for the purpose and a supplementary demand of Rs. 750 was made and was met by reappropriation. In spite of the increase in the cost of quinine, the demand for more money for the purchase and sale of quinine indicates that people have appreciated the value of quinine for combating malaria. In addition to the quinine distributed free in the hospitals and dispensaries and through the public health staff of the province, a free distribution of 35 lb. of quinine from the reserve stock of the department was made during the year.

In order to build up a reserve stock of quinine for the province to guard against any sudden depletion of supply from the usual source due to the present war, Government decided to purchase annually for four years an extra quantity of quinine in addition to the present annual purchase from the Government of Bengal. 400 lb. of quinine was purchased during the year representing the first instalment of the reserve stock.

CHAPTER VIII.

Maternity and Child Welfare.

Maternity and child welfare work was carried on as usual in the four important maternity and child-welfare centres of the province, viz., Cuttack, Balasore, Sambalpur and Berhampur. Besides the above centres there are also small nuclei of organisation for maternity and child welfare work in several other places in the province, viz., Bhadrak and Hatigarh in Balasore district, Khurda and Puri in the Puri district, Bargarh in Sambalpur district, Parlakimedi, Russelkonda and Balipadoro in Ganjam district, and Koraput, Rayagada, Jeypore and Umerkote in Koraput district. Indigenous *dais* trained under the Victoria Memorial Scholarship Fund and employed in certain rural hospitals and dispensaries also did some amount of maternity and child welfare work in the rural areas.

The centre at Cuttack receives an annual contribution of Rs. 1,500 from Government towards the pay of the Maternity Supervisor (L.M.P.). The centres at Balasore and Sambalpur are under the direct charge of the lady doctors (L.M.P.) attached to district headquarters hospitals and part of their pay is met by contribution from the Orissa Branch of the Dufferin's Fund, while the other centres are maintained entirely by subscriptions raised locally and from contributions received from the local bodies.

A short summary of the activities of the various maternity and child welfare centres in the province during the year 1940 is given below :—

Cuttack district.—The centre at the headquarters station of this district is in charge of a qualified lady Sub-Assistant Surgeon designated as the Maternity Supervisor. Four *dais* and one midwife, all fully qualified, have been employed by the centre. The Supervisor holds the dai-training classes for two hours daily, except on Sundays, (only for nine months in a year), supervises the cases conducted by the midwife and the *dais*, treats the out-door cases at the centre, and gives necessary advice according to the circumstances of each case and also carries out health-visiting in the homes of the women and children who come within the influence and service of the centre.

Only nine out of the sixteen *dais* trained at the centre appeared at the final examination out of which six passed.

During the year under report the staff attended 296 mothers and 4,551 children (572 infants and 3,979 toddlers). As many as 680 ante-natal cases and 1,880 post-natal cases were also attended by the staff. Out of 942 confinements attended, 685 were conducted personally by one or other of the trained staff, the Supervisor herself attending on 152 labour cases conducting 15 of them personally. There is, I must state, considerable scope for the general improvement both in the quality and quantity of work of the

lady Supervisor. This, I hope, will greatly improve, when the new building for the maternity and child-welfare centre will be completed. With a little more financial aid the centre housed in the new building is expected to function far more satisfactorily than what it has been able to do in the past. Donations and subscriptions by local efforts are being raised for this purpose through the activities of the Committee. It is most unfortunate that the local municipality has for no special reason ceased to contribute anything for the up keep of this centre, when one would expect the maximum help from it.

The want of a suitable building in a central locality, as at Berhampur, has been a great handicap to this centre. Arrangements have since been made for the construction of a proper building at a suitable site and the building is now under construction, the foundation stone of which was laid by Lady Hubback just before she left the province in last March.

Balasore district.—The centre at Balasore is in charge of the lady Sub-Assistant Surgeon attached to the Sadr Hospital, Balasore. Four qualified *dais* are employed at the centre, out of whom three are paid from the funds of the centre and the remaining one by the local municipality. These *dais* conduct labour cases in the town free of charge and give instructions to expectant and parturient mothers. During the year under report they attended 570 ante-natal cases and conducted 351 labour cases in the town. Their work is supervised by the lady doctor as also by the Civil Surgeon of Balasore.

Two *dai* pupils were trained at the centre in 1940 by the lady doctor and both of them passed the qualifying examination.

The total income and expenditure of this centre during the year 1940 was Rs. 1,524-5-8 and Rs. 1,608-3-0 respectively. The excess expenditure was met out of the Reserve Fund.

The centre at Hatigarh is managed by the American Baptist Mission and is in charge of a *dai*, who does the maternity work in this area. She is paid by the Orissa Branch of the Indian Red Cross Society. She attended 155 ante-natal cases and conducted 10 labour cases during the year under report.

The third centre in the district is at Bhadrak which is managed by the Bhadrak Un'on Board. There is a qualified *dai* who carries on most of the maternity work through home visiting. The *dai* is paid by the Orissa Branch of the Indian Red Cross Society.

Sambalpur district.—The centre in the district headquarters is managed by the lady doctor attached to the Sadr Hospital and assisted by a qualified midwife and a trained *dai*. Three *dai* pupils were trained during 1940 by the lady doctor and passed the final examination. 103 anti-natal visits and 33 post-natal visits were carried out by the staff, 182 labour cases were attended by the midwife, while 32 cases were personally seen by the lady doctor.

Puri district.—The centre at Puri is in charge of a midwife and a *dai* who are paid by the Puri Municipality. Besides attending simple labour cases the staff carry on home visiting to advise prospective mothers regarding necessary care to be taken. 201 ante-natal and 90 post-natal cases were attended by the midwife and the *dai*. Altogether 200 labour cases were attended by them during the year 1940.

The centre at Khurda is financed by the Puri District Board. The work of the centre is carried out by a trained *dai*. She visited 136 ante-natal and 427 post-natal cases. 165 mothers attended the centre during the year under report. 125 labour cases were attended to by the *dai*. The centre is managed by a local committee.

Ganjam district.—The centre at Berhampur is housed in a specially built building and is well equipped and organised. The management of this centre is vested in an Executive Committee. The local municipality pays an annual contribution of Rs. 1,000 which is augmented by some local

subscriptions. Besides the residential midwife attached to the centre, the municipal *dai* attends confinements and other part-time duties at the centre. About 40 babies are regularly given milk twice a day. They are also bathed once every day and their minor ailments carefully attended to. About 240 ante-natal cases and 72 post-natal cases have been visited by the midwife. Eighty confinements were conducted at the centre excluding 10 abnormal cases which were sent to the Government Headquarters Hospital.

The centre at Parlakimedi is managed by a local committee. The maternity work of the centre is carried out by a trained *dai* under the supervision of the lady Sub-Assistant Surgeon attached to the Government Hospital, Parlakimedi. The *dai* attended 313 maternity cases of which 9 were abnormal. Two of the abnormal cases were sent to the Government Hospital, Parlakimedi.

The centre at Russelkonda has been working satisfactorily ever since its inauguration by Lady Hubback in the year 1937. It is now being managed by a committee of officials and non-officials. The midwife besides attending to the maternity work in the headquarters is visiting villages within a radius of five miles from Russelkonda, for doing propaganda work. Babies from the surrounding villages are being brought to the hospital twice a week where there is a lady Sub-Assistant Surgeon available for bath and treatment of skin, eye, and other diseases. Besides conducting 64 labour cases at the centre the midwife visited about 55 ante-natal cases and 70 post-natal cases in different parts of the town during the year 1940.

It is gratifying to note that this small centre had successfully competed for the "Imperial Baby Week Challenge Shield Competition" (exclusive of United Kingdom) conducted by the National Baby Welfare Council London and was awarded a special certificate for getting the fourth place in the Empire.

There is a Reserve Fund of Rs. 450 at the disposal of the centre. It receives a small grant from the local union board and contributions from local people.

Koraput district.—In this district there are four maternity and Child-welfare centres, viz., at Koraput, Rayagada, Jeypore and Umerkote. The Koraput centre is working under the guidance of the Civil Surgeon of Koraput. The centres at Jeypore and Rayagada are each managed by a local committee. At Jeypore the heart and soul of the centre is the wife of the local Government Sub-Assistant Surgeon who is the secretary of the committee. The lady Sub-Assistant Surgeon is in charge of professional work. The Maharajah of Jeypore has been meeting most of the financial burden of the centre. The Sub-Assistant Surgeon in charge of the Local Fund Dispensary, Umerkote is in charge of the centre at Umerkote. All these centres are financed by public subscriptions and donations.

At Koraput a *dai* has been specially appointed to go round the neighbouring villages to give instructions to expectant mothers. Regular propaganda on ante-natal and post-natal care is being done at each of the four centres. Milk is distributed to poor babies and they also get facilities for obtaining baths at the centres.

As I have already remarked in my last year's report, the child welfare and maternity work in the province is still in its infancy and the few centres in the different parts of the province are being run more or less on different lines. A good deal of organisation and upliftment is necessary in the maternity and child welfare activities and it is desirable that a woman medical officer of health with a special training in the subject should be appointed to organise the work in the right line and to co-ordinate the activities of the different centres. The question of appointing such a medical officer is under consideration, thanks to the help offered by the Central Dufferin's Fund.

I would also press for grants-in-aid from Government to these voluntary organisations and the necessary Government control over them through the Medical and Public Health Departments.

CHAPTER IX.

School hygiene and medical examination of school children.

The system of annual school medical examination on a compulsory basis affords amongst other things an opportunity to detect and control various types of diseases and ailments as they appear among the school children and also to detect the early onset of nutritional deficiency amongst them and to take effective measures as best as possible to deal with such cases. It also saves the parents or guardians of the school children from unnecessary worry and expenditure for getting their children medically examined at least once a year by a qualified medical man in order to guard against certain insidious diseases which makes life miserable if not treated at the early stages.

The Government School Medical Officer and his assistant inspect all the high English schools and middle English schools situated in the urban areas where there are high English schools in the province. The scholars in the middle English and middle Vernacular schools in the rural areas are examined by the district board dispensary doctors. No medical examination of school children in primary schools is carried out as the number of such schools is too large for the existing Government and the district board staff although it is realised that these schools ought to be linked up with the higher grade schools in the scheme of medical inspection of school children.

Medical examination of scholars.—During the year under report the Government school medical staff visited 31 high and 5 middle English schools as against 28 high and 11 middle English schools in the previous year. The total number of students examined in these schools was 3,579 against 4,809 of the previous year and of these, 2,294 or 65 per cent were found defective against 2,986 or 62 per cent in the previous year.

Common defects detected among school children.—The common defects detected among the student population of the province examined, in order of their frequency, are as follows :—

Malnutrition	19·5
Enlarged spleen (Chronic Malaria)	12·0
Enlarged tonsil	10·7
Carious teeth	8·1
Defective eyesight	7·3
Scabies	6·6
Phimosis	6·5
Granular lids	5·4
Non-vaccinated	4·2
Pyrrhoea	3·1
Postural defects	3·0
Vitamin deficiency	2·7
Hydrocele	2·7
Anaemia	2·3
Ringworm	1·8
Leprosy	1·1

Incidence of leprosy among school children.—Forty cases of leprosy were detected among 3,579 students examined during the year under report

against 55 cases among 4,809 students examined in the previous year. The percentage of incidence among the scholars works out to 1·1 or in other words the incidence was 1 in 89 as against 1·15 or 1 in 86 in the previous year. The infective cases were advised to be excluded from the school in the interest of other students and to undergo systematic and regular treatment. The non-infective cases were allowed to attend school but were compelled to undergo treatment regularly and were placed under medical surveillance. It is hoped that the spread of this infection among the student community will be effectively controlled with the co-operation of the Headmasters, the guardians and the departmental authorities.

Nutrition and hygienic consciousness.—Of the total number of 3,579 students medically examined during the year under report 663 boys or 18·5 per cent were found with good nutrition, 2,209 or 62 per cent with fair nutrition and 707 or 19·5 per cent with bad nutrition against 1,258 or 26 per cent, 2,889 or 60 per cent and 662 or 14 per cent respectively during the previous year.

Eradication of diseases and correction of the common errors in diets have been always kept in view as the final goal of medical examination of the students. Whenever a school is visited the standard of cleanliness of the students of that school is gauged and the deficiency diseases prevalent in the locality are detected by mass examination of the students. Attempt is then made to impress on the students the necessity of balanced diet, regular hygienic habits, physical exercise and personal cleanliness etc., for the upkeep and normal growth of the body. In regard to nutritional defects attempts are invariably made through class lectures, lantern slide demonstrations and personal conversation with the teachers and the students to leave definite impressions in their minds that diet is to a large extent a matter requiring modifications and adjustments, depending upon, of course, economic and other local conditions.

It is gratifying to note that there has been a good response from the student community and consequently the hygienic consciousness of the students has improved a good deal. The students are gradually learning to rely on the wholesome effects of balanced diet and hygienic living, although serious economic difficulties stands in the way of sincere attempts of many to improve the state of affairs.

Students benefited by treatment.—During the medical examination of students the old defectives are examined in the light of their previous defects. It was found that during the year under report 754 or nearly 63 per cent out of a total number of 1,193 old defective students examined, were free from their previous defects. The result solely depends on the endeavour of the parents to arrange for treatment of their wards according to the recommendations of the School Medical Officer. Although the response from the educated parents is quite good it is noticed that many parents are indifferent to what the School Medical Officer recommends for their wards. They are too callous to appreciate the evils of disease and the blessings of health to their wards. Although the Headmasters repeatedly send intimation to them to keep their wards under a prescribed system of treatment very few of them only take any step whatsoever. It is, however, sincerely hoped that this type of indifference on the part of the parents will gradually disappear and the time will soon come when the young girls and boys getting education in the schools and colleges of the country will make an enlightened and educated parenthood and will realise the blessings of health and the evils of the diseases upon their children.

In the rural areas, the total number of students in middle English and middle Vernacular schools examined by the district board dispensary doctors was 3,731 and the number recommended for treatment was 1,584 or 42·5 per cent.

Lectures on hygiene.—Every student appearing for the Matriculation Examination of the Patna University is required to attend a minimum of

10 lectures. The whole course consists of an elementary idea of Anatomy and Physiology of the human body, personal hygiene, body nutrition and balanced diet, causes, early symptom and prevention of diseases like malaria, leprosy, tuberculosis, cholera, filariasis and smallpox. This goes a long way in improving the sanitary sense of students and helps them a lot in making them good citizens. The School Medical Officer delivers these hygiene lectures to the matriculation students of the high English schools of North Orissa as required under the Patna University rules which operate in North Orissa only, when he visits these schools for school medical examination. 219 lectures with and without magic lantern demonstrations on different subjects of hygiene were delivered to the students of matriculation classes in English and to the students of lower classes in vernacular.

Vacation course.—During the summer vacation of the schools the School Medical Officer and his assistant were engaged in delivering a course of hygiene lectures on various health subjects to the primary school teachers and the members of the inspecting staff of the Education Department at different centres in the province. Thirty such lectures were delivered during the year under report.

Inspection of school premises.—During their visit to the school the School Medical Officer and his assistant regularly inspected the sanitation of the school and the hostel buildings. These inspections have helped a good deal in improving the general sanitation of the school premises and in rectifying the defects in the sanitary conveniences provided for the students. The School Medical Officer also inspected the arrangements made for physical exercises and games and the sitting arrangements in class rooms.

Midday school Lunch.—The scheme for providing midday school lunch based on a small monthly fee realised from the school children has been introduced in some more schools of the province and is reported to be working satisfactorily.

All reports of medical inspection of schools in the province were transmitted through my office to the Director of Public Instruction with my necessary comments, and it is a pleasing feature to note that excellent co-operation has invariably existed between the Public Health and the Education Departments of the province.

CHAPTER X.

Health Propaganda.

This work was carried on as usual by the district and municipal health staff during the year under report. As in the previous year they delivered lectures in their respective districts and municipalities with and without the demonstration of magic lantern slides and distributed leaeflts and pamphlets on the prevention of the various epidemic diseases namely cholera, samllpox, malaria, hook-worm diseases, village sanitation etc., in the vernacular languages of the province.

Propaganda on various health subjects was carried out in 7,327 villages and in almost all the towns of the province. 1,460 lectures with magic lantern demonstration and 8,208 lectures and talks illustrated with charts were delivered to a total audiance of about 1,023,000. The municipality of Cuttack in addition to the above methods of propaganda delivered short discourses with the aid of a film projector in different places of the town.

At larger festivals interesting posters on public health subjects were posted at important places where they could attract the notice of the pilgrims.

The National Health and Baby Week was as usual observed in several centres in the district of Ganjam in which all the local officers of the various

departments participated. The following primary items were as in the previous year attended to in almost all the centres :—

(*i*) cleanliness and village sanitation ;

(*ii*) lectures on health subjects with magic lantern demonstrations ;

(*iii*) exhibiting posters and coloured charts and health models and explaining them to the villagers ;

(*iv*) staging of health dramas

(*v*) taking out processions, singing health songs and slogans ;

(*vi*) holding sports and distributing prizes and sweets ;

(*vii*) distributing health pamphlets and leaflets ; and

(*viii*) holding competitive examinations of essays on health subjects and awarding suitable prizes.

Three Public Health Exhibitions were organised in the province during the year under report, namely at Gramnandipur in Jajpur police station in the district of Cuttack and Athantar (Balipatna) and Ghorodia (Delang) in the district of Puri in the months of March and April.

The travelling health and medical unit in the district of Balasore which had been abandoned for want of funds in April, 1939 was restored in April 1940 and did a good amount of public health propaganda and preventive and curative work in the district.

The lady Health Visitor of the Provincial Anti-tuberculosis Association as in the previous year, regularly carried out home-visiting work in the congested localities of the Cuttack town and in course of her visit gave necessary advice and instruction to the relatives and the neighbours of tubercular patients regarding causation, spread and prevention of tuberculosis.

In a province where there is, as elsewhere, so much of general ignorance and apathy in regard to public health matters, intesive propaganda through various means as noted above has played a notable part in bringing about a decided improvement in the general attitude of the people towards their environmental hygiene. I must here express my thanks to the willing co-operation which all the local newspapers have given in giving wide publicity to various subjects relating to public health propaganda. As propaganda plays an important role in the general public health conception of the people, it was decided to have a separate health publicity section attached to the Public Health Department. The Government have very kindly appreciated the importance of this matter and have sanctioned the appointment of a small staff as an experimental measure from the middle of this year.

As noted in the different chapters of this report this department has materially contributed in different ways in carrying on public health propaganda work throughout the province and has helped some of the local bodies with models, charts, posters, leaflets, magic lantern slides, bore-hole machines, etc., and has also helped in organising health exhibitions.

CHAPTER XI.

Public Health Administration.

The statement below shows the receipts and expenditure under the head "39—Public Health (Medical)" for the years 1939-40 and 1940-41 :—

Head.	Receipt.		Heads of expenditure.	1939-40.		1940-41.	
	1939-40.	1940-41.		Budget provision.	Expenditure.	Budget provision.	Expenditure.
1.	2	3	4	5	6	7	8
	Rs.	Rs.		Rs.	Rs.	Rs.	Rs.
Sale proceeds of sera and vaccine and other receipts, etc.	22,577	10,883	Public Health establishment.	69,386	67,530	65,956	63,115
			Medical examination of scholars and teaching of hygeine in high schools.	5,812	6,338	6,185	5,851
			Malaria ..	16,010	12,353	14,176	12,696
			Other epidemic diseases.	23,040	33,420	22,743	22,402
			Publicity campaign	1,700	641	1,700	nil.
			Bacteriological laboratories.	15,281	15,878	15,600	15,391
			Grants to district boards and municipalities for public health purpose.	93,394	58,608	42,250	72,853
			Contribution to Pasteur Institute for vaccines.	1,490	2,427	1,700	1,911
			Total ..	2,26,113	1,97,195	1,70,310	1,94,219

The Director of Health and Inspector-General of Prisons is the administrative head of the Public Health Department. The following other staff were maintained by Government for public health work during the year under report :—

(1) The Assistant Director of Public Health.

(2) The Pathologist and Public Analyst to Government (Officer in charge of the Provincial Public Health and Pathological Laboratory).

(3) Three Medical Officers of Health.

(4) Two second class Medical Officers of Health.

(5) The School Medical Officer.

(6) The Assistant School Medical Officer.

(7) The Provincial Malaria Officer.

(8) The Assistant Malaria Officer.

(9) One Analytical Chemist attached to the Provincial Public Health Laboratory.

(10) One Assistant Analytical Chemist.

(11) One Special Health Inspector.

(12) One Inspector of Vaccination.

(13) Four Sub-Inspectors of Vaccination.

(14) Twenty Health Inspectors.

(15) One Malaria Health Inspector.

(16) Two Nutrition Health Inspectors.

(17) Twenty-seven Vaccinators.

Besides the above-mentioned public health staff maintained by Government, the district boards of Cuttack, Puri and Balasore employ their own first class health officer with D.P.H. qualification under their health organisation schemes. To each of these district health organisations Government contribute a sum of Rs. 10,000. It is hoped to have a separate whole-time first class Health Officer appointed by Government for the Sambalpur district soon. Besides the Health Officer the local bodies maintain a small staff of health inspectors and other subordinate public health staff which, as pointed out elsewhere, is most inadequate.

The Assistant Director of Public Health is attached to the office of the Director of Health and Inspector-General of Prisons. Besides assisting the Director of Health and Inspector-General of Prisons in office work in respect of public health matters, he was employed in investigating into the epidemics, suggesting measures of control and in seeing that the actions taken were adequate to combat the epidemics. He also supervised various prophylactic measures such as vaccination, cholera inoculation, etc., and inspected the public health activities of the local bodies and the important fairs and *melas* in the province. The supervision and advice rendered by him have done much to assist the local bodies in effecting improvement in sanitation and public health of their respective areas. He is the teacher in Hygiene in the Orissa Medical School and also the Honorary Secretary of the Provincial Tuberculosis Association.

The Bacteriologist and Public Analyst to Government is in charge of the provincial Pathological and Public Health Laboratory. Besides all sorts of analytical work of the Public Health Department, pathological work was also carried on as usual in the Laboratory. He is also the Lecturer in Pathology in the Orissa Medical School.

The Analytical Chemist and the Assistant Analytical Chemist are chiefly concerned with the analysis of food stuffs. The appointment of the Assistant Analytical Chemist was an addition to the staff of the Laboratory made during the year in order to cope with the heavy increase in the work in the Laboratory.

Two of the three provincial medical officers of health have been employed as Health Officers of the two important municipal towns of Cuttack and Puri and the third as the District Health Officer, Ganjam.

The two second class medical officers of health under Government have been employed as the Health Officer of Berhampur municipality and the Assistant Health Officer of Koraput district.

The School Medical Officer and his assistant were employed in the medical examination of scholars of high English schools and all middle English schools situated near about these high English schools in the urban areas.

The Provincial Malaria Officer and his staff were employed throughout the year in investigating malaria mainly in Puri town and its suburbs and also in carrying out minor investigations in other parts of the province, notably in Kendrapara municipal town in the district of Cuttack and Balasore municipality and Lakshmanath in Balasore district and certain important villages in Puri district particularly Pipli and Sakhigopal.

The Special Health Inspector was employed chiefly in assisting the Assistant Director of Public Health in investigating into the epidemics and also in assisting the public health staff in controlling epidemic diseases. He also assisted the Assistant Director of Public Health in the inspection and supervision of vaccination work in the province, and himself carried out a good deal of public health propaganda.

The Inspector of Vaccination, the Sub-Inspectors of Vaccination and the Health Inspectors are employed for carrying out public health and vaccination work in rural areas under the supervision of the Health Officer or the Civil Surgeon who ever is in charge of public health administration of the district. For administrative purposes the Inspectors and Sub-Inspectors of Vaccination have subsequently been designated as Health Inspectors, possessing as they do the requisite qualifications of a Health Inspector.

Both the Nutrition Health Inspectors were employed in carrying out intensive field investigation on nutrition in the district of Puri.

Besides the above regular staff, epidemic doctors of Sub-Assistant Surgeon class, Health Inspectors and Vaccinators were, as usual employed temporarily for epidemic duty as and when necessary to supplement the district public health staff.

The local bodies are held responsible for the sanitary requirements of the areas in their charge. A list of sanitary staff employed by the municipalities and the district boards of the province is given in Appendix III.

The public health problem in rural areas of the province presents many difficulties. The scattered nature of the population, the extensive areas that have to be covered without adequate facilities for communication and the insufficiency of public health subordinate staff under the district boards render it difficult for the efficient discharge of public health functions. As most of the deltaic parts of the province are liable to flood every year it is very difficult to provide suitable drinking water in the rural parts of this vast area. In addition, the villagers are still so strictly conservative and superstitious that it takes time for them to appreciate the value of instructions on health subjects given by the public health workers; nevertheless public health work has been vigorously pursued with encouraging results.

CHAPTER XII.

The annual vaccination report is appended to this report.

CHAPTER XIII.

Other Public Health Services.

The Provincial Pathological and Public Health Laboratory.—The total number of samples examined in the Provincial Pathological and Public Health Laboratory was 3,609 during the year 1940 as against 3,136 in the year 1939. Of these 221 were samples of water, 297 samples of food stuffs and 3,091 pathological samples.

Water.—Of the total number of 221 samples of water examined chemically and bacteriologically during the year 1940 as against 205 samples examined in the year 1939, 127 were obtained from protected water-supplies, 34 from jails and 60 from other sources at the instance of the various departmental officers and the local bodies. Samples of water from the protected water-supplies were examined quarterly and those from the jails annually as usual.

Food stuffs.—297 samples of food stuffs were examined during the year under report as against 233 in the previous year. The amount of work done in this direction depends on the receipt of samples from the different local bodies. It is desirable that the local bodies should take better interest and exercise greater vigilance in the sale of food stuffs in their respective jurisdictions and send more samples for examination, with a view to effectively control the sale of adulterated and unwholesome food stuffs.

Of the total number of 297 samples of food stuffs analysed 159 or 53·5 per cent were found adulterated as gainst 59·23 per cent in the previous year, 130 were found genuine and on 8 samples no opinion could be given owing either to inadequate quantity of the sample sent or absence of any prescribed standard or to the loss of contents from breakage of parcels in transit.

As the Orissa Prevention of Adulteration and Control of Sale of Food Act, 1938, with its wider and better provision than the previous Acts in force has since been enforced, it is hoped that the local bodies will take the fullest advantage of the Act and the rules framed thereunder so that the adulteration of food stuffs will gradually diminish. It is, however, very necessary indeed that the Act and the rules framed thereunder should operate throughout the province if any reasonable good should be derived from this excellent Act.

The item of food mostly adulterated is ghee. The chief source of adulteration in ghee is the so called vegetable product which is so widely sold at a very cheap rate throughout the province.

Samples of milk were found adulterated only with water, and the vegetable oils with cheaper oils.

Pathological section.—Work of the pathological side is gradually increasing year after year. In all, 3,091 samples as already stated were examined during the year under report as against 2,698 in 1939 and 1,276 in 1938. Samples were received from all over the province. A very short resume of the important work carried out is given below :—

Serological and biochemical examination.—Wassermann Reaction and Kahn tests are done once a week but in urgent cases only Kahn test is done at the time of demand.

The total number of Wassermann Reactions and Kahn tests done during the year were respectively 965 and 985.

Serological test for eight cases of Yaws were carried out, but excepting in one case where the blood was found strongly positive, the other samples of sera were received in a grossly infected and haemolysed state and the result of the test was vitiated. This work is being taken up vigorously and it is hoped that a good number of cases will be done during the coming year.

Widal agglutination test for 79 cases was done. Some specimen were also tested for Br. mellitensis, Br. abortus and Tick-typhus. Aldehyde test was done with 39 different specimens. All these specimens were received from the Cuttack General Hospital. More elaborate biochemical tests such as sugar tolerance test, blood urea, blood calcium, blood creatinine, etc. were done during the year under report. These tests were taken up in the Laboratory for the first time since last year.

Bacteriological cultures and preparation of autogenous vaccines.—The number of cultural examination of blood increased considerably. Out of 28 cases, in two Streptococcus non-haemolyticus and in one Streptococcus haemolyticus were isolated. The rest were found sterile.

Cultures were also made from throat swabs, sputum, urine, stool, etc. In every case the biochemical reaction of the organism isolated is ascertained and also confirmed by agglutination tests with specific agglutinating sera, and where necessary by animal inoculation.

In the preparation of autogenous vaccines the processes of isolating each and every sort of pathogenic organism present, obtaining pure culture of each of the varieties, counting them separately and finally mixing them in proper dosage are followed. Before ampouling, tests for sterility both for aerobes and anaerobes are done twice.

Clinical examination of specimens.—This consists of routine examination of urine, stool, sputum, blood, etc.

On recommendation of qualified medical practitioners examination of sputum of suspected cases of tuberculosis is done free of charge in this

Laboratory. During the year under report 111 specimens of sputum were examined. Out of these 41 were found positive.

Tissue section—Sections were prepared by both freezing and paraffin methods in all the 32 cases sent up to the Laboratory for investigation.

A statement showing the various food stuffs obtained from the different sources and the results of their analysis is given below :—

FOOD ANALYSIS IN 1940.

Source.	Ghee.			Milk.				Food stuffs.				Mustard oil.			Groundnut oil.			Miscellaneous.				Total.			
	G.	A.	T.	G.	A.	N. Op.	T.	G.	A.	N. Op.	T.	G.	A.	T.	G.	A.	T.	G.	A.	N. Op.	T.	G.	A.	N. Op.	Total.
Berhampur Municipality.	1	5	6	5	26	1	32	16	10	5	31	1	...	1	7	10	17	8	1	...	9	38	52	6	96
Cuttack Municipality.	9	18	27	...	...	...	...	4	4	...	8	18	28	46	...	...	...	2	2	...	4	33	52	...	85
Kendrapara Municipality.	1	2	3	...	...	...	...	...	...	...	...	2	...	2	...	...	...	1	...	...	1	4	2	...	
Jajpur Municipality.	...	7	7	...	10	...	10	...	...	...	...	1	1	2	5	..	5	3	...	...	3	9	18	...	27
Puri Municipality	3	8	11	2	6	...	8	...	...	...	...	4	1	5	...	...	...	3	...	...	3	12	15	...	27
Balasore District Board.	...	1		...	...	...	...	...	...	...	...	7	2	9	...	...	...	...	...	...	...	7	3	...	10
Balasore Municipality.	...	2	2	...	...	...	...	2	1	...	3	4	3	7	...	...	...	...	...	...	...	6	6	...	12
Sambalpur Municipality.	4	4	8	...	...	...	...	...	...	...	...	2	1	3	1	...	1	7	4	2	13	14	9	2	25
Bargarh Sanitation Committee.	1	2	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	...	...	3	4	2	...	6
Superintendent, Sambalpur Jail.	...	...	...	...	...	...	...	...	...	...	...	1	..	1	...	...	...	...	...	...	...	1	...	...	1
Private samples	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	1	...	...	...	...	1	...	...	1
Senior Marketing Officer, Orissa.	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	1
	20	49	69	7	42	1	50	22	15	5	42	40	36	76	14	10	24	27	7	2	36	130	159	8	297
	71°/。			84°/。				35°/。				47·4°/。			41·4°/。			18·4°/。				53·5°/。			

G—Genuine. A.—Adulterated. N. Op.—No opinion. T.—Total.

CHAPTER XIV.

General Remarks.

1. **Enteric Fevers and Cerebro-spinal Meningitis.**—Under the existing arrangement facility for the collection of statistics for these two kinds of infectious diseases separately for the purposes of the public health report does not exist ; but it appears from the hospital figures that the enteric group of infections form a fair proportion of cases diagnosed as "Fevers". This, no doubt, is traceable chiefly to the unsafe drinking water-supplies available in the rural and also in most of the urban areas besides of course the gross insanitary home surroundings.

Cerebro-spinal meningitis occurs only rarely in this province and has not so far occurred in any epidemic form to call for any special attention. Thirty-six sporodic cases of cerebro-spinal meningitis from different parts of the province were treated in hospitals and dispensaries of this province and of these only one case proved fatal.

2. **Notification of infectious diseases.**—As already stated in the previous Annual Public Health Reports the Bihar and Orissa Municipal Amendment Act of 1935 and the Madras District Municipalities Act of 1920 provide for the compulsory notification of certain infectious diseases in municipal areas. In larger municipalities the provisions of the Acts are enforced and respected too to a certain extent especially with regard to cholera and smallpox, but in the smaller municipalities particularly of North Orissa these sections of the Act remain almost a dead-letter, as the municipalities concerned have neither the organisation nor the desire to enforce them. As for the rural areas, there is no provision in the Bihar and Orissa Local Self-Government Act or the Madras Local Boards Act for the compulsory notification of infectious diseases.

The result is that when an infectious disease occurs in a particular house for the lack of timely information prompt action cannot be taken by the public health authorities concerned to timely check its spread.

3. **Port Health Administration.**—There are three minor ports in the province, viz., Gopalpur in the district of Ganjam, Chandbali in the district of Balasore and Puri town.

At the former two ports, the medical officers (Sub-Assistant Surgeons) in charge of the local fund dispensaries have been appointed as Port Health Officers and at Puri the Civil Surgeon is the Port Health Officer. Of these three ports, Gopalpur is most important and has a regular shipping traffic with Rangoon and inland ports. During the year under report 92 vessals with 9,279 crew and 15,100 passengers arrived at the port of Gopalpur and departed with 18,440 passengers. Of these vessels only 4 in-coming vessels were inspected by the Port Health Officer, there being a case of smallpox on board of one and a case of chicken-pox on board of each of the other three. The vessels were properly disinfected. The general sanitation of the town and port was good throughout the year under report.

The Chandbali port is situated on the bank of the river Baitarani. It is suitable for navigation up to Chandbali only. Two vessels *Dhamra* and *Saaid* ply between Calcutta and Chandbali twice a week. In *Dharma* 27 crew, 1 captain, 1 engineer and 3 clerks, i.e., 32 persons altogether were engaged and in *Saaid* 22 crew, 1 captain, 1 engineer and 2 clerks, i.e., 26 in all were engaged. *Dhamra* carried 245 passengers in fair weather and 193 passengers in foul weather, whereas *Saaid* carried 298 passengers in fair weather only. These two vessels were regularly inspected during the year. All the seamen treated were Asiatics. No infectious disease occurred on board of any vessel and there was no death from any infectious disease in the port. No disinfection or fumigation of any vessel was carried out as there was no occasion to do so at any time during the year under report. Seventy-nine crew were vaccinated during the year. No leper entered into the place through the port. The general health of the port was good throughout the year. Government maintain a port officer and a staff attached to his office for the management of the ports.

No steamer called at the port of Puri during the year under report.

4. **Urban and rural housing condition.**—No noteworthy improvement was effected in the urban and rural housing conditions in the province. Although model bye-laws have long been framed under the Municipal Act for the regulation of construction of building in urban areas, the local bodies concerned seldom appreciate the necessity for enforcing them. Only in the bigger municipalities employing Health Officers, the plans for buildings are scrutinised and the sites for such buildings are inspected by Health Officers with a view to ensure sanitary surroundings but unfortunately the opinion of the Health Officers is not always respected. In the rural areas conditions are anything but satisfactory. In villages people construct houses on their own lands without the least idea of a well-thought-out plan or with any consideration for sanitation. Houses are generally made of mud walls and thatched roofs. They are in most cases dark and ill-ventilated and consequently damp. There is no law to regulate the construction of buildings

or houses in the rural areas. Well-to-do and educated people have, however, begun to appreciate the value of well-planned houses constructed on sanitary principles. A number of such houses have sprung up here and there.

5. **Leprosy relief.**—The number of treatment centres (clinics) has increased from 115 in the year 1939 to 137 in the year under report. This includes the 13 rural treatment centres in the remote rural areas of the province where the incidence of leprosy is very high and the dispensary is far off, and are managed by specially trained leprosy assistants under the instruction of the District Leprosy Relief Officers.

With a view to popularise these clinics and to drive home to the mind of the rural mass the necessity of isolation of infectious cases and their treatment, intensive survey and propaganda by distribution of pamphlets and leaflets and magic lantern demonstrations are being carried out throughout the province particularly in these centres. Coloured wall posters have also been posted at important Railway platforms and post offices, with the consent of the authorities concerned.

As the necessity for anti-leprosy propaganda among the women of the province was keenly felt, a resolution for appointing six lady leprosy assistants, one for each of the six districts, was adopted by the Executive Committee. Accordingly, a lady leprosy assistant was appointed in the district of Ganjam and two others were selected for the districts of Balasore and Puri and received necessary training at the Cuttack Leper Asylum and Puri Leper Colony respectively.

During the year the Junani Leper Colony in the district of Sambalpur was founded. The District Leprosy Councils of Balasore, Puri, Cuttack and Koraput were affiliated to the Provincial Council. Two medical licentiates were trained at the Cuttack Leper Asylum and the Leprosy Clinic attached to the Cuttack General Hospital for about six weeks. Another candidate from Sambalpur was deputed to undergo training in leprosy at the School of Tropical Medicines, Calcutta. The total number of doctors in the province, who have so far been trained in the special subject of leprosy under the auspices of this Association, is twenty-four.

6. **Yaws.**—Certain parts of the district of Koraput and Ganjam agencies where the habits of the poeple are very insanitary are noted for the prevalence of this disease. The disease is widely prevalent especially in Malkangiri, Rayaghada, Gudari (Gunupur taluk) and Pottangi taluks. Though it was known until recently to be confined to the *Koyas* it is found to be affecting the *Khonds* and *Dombs* too. So the name " Koya disease " for Yaws is gradually becoming a misnomer.

The Provincial Government sanctioned Rs. 1,000 to the Mission Hospital at Serango in the district of Ganjam for the treatment of Yaws in that area. They also sanctioned a contribution of Rs. 1,000 to the Konta Dispensary in the Bastar State for the treatment in that hospital of the patients from Orissa suffering from Yaws. They have also sanctioned temporarily at a cost of Rs. 3,151 an itinerant dispensary at Kalimela in the district of Koraput for the treatment of Yaws. Besides, facilities for the treatment of Yaws are provided by supplying special drugs to all the medical institutions in the areas where this disease prevails. Over and above the usual grant for the purchase of medicines, special grants from different sources were also given to these institutions to amplify the scope of the treatment of this particular disease. Government were also moved to provide a sum of Rs. 3,000 for the purchase of medicines to meet the incessant demand from practically all centres of treatment of this disease. The grant has since been sanctioned and distributed among the different centres for treatment.

The treatment is done with arsenicals given intravenously. A recently introduced preparation, viz., Thiarsin is being tried at Kalimela with encouraging results. In spite of the heavy odds which the itinerant dispensary had to face in the beginning, the headway it made was quite satisfactory. 613 cases of Yaws were treated druing the last 7 months of the year out of which 150 cases are reported to be completely cured during the year.

7. **Filariasis.**—This disease is widely prevalent in the coastal districts of the province specially in Cuttack and Puri. A scheme to carry out investigation on filariasis with aid from the Indian Research Fund Association was under the consideration of Government. It was decided at this time to postpone this investigation to a later date.

8. **Nutrition.**—A small scheme for intensive field investigation on the dietetic and nutritional condition of the people in one of the smaller districts of the province was sanctioned by Government. Two Health Inspectors temporarily appointed with a short training on the subject are carrying on the work in the district of Puri under the supervision of the Assistant Director of Public Health, who has received special training in nutrition at the Nutrition Research Laboratories, Coonoor.

9. **Rural water-supply.**—One of the urgent and important measures of public health amenities awaiting satisfactory solution is the provision of safe and wholesome drinking water-supplies throughout the rural areas of the province. Heavy recurring epidemics of cholera and other bowel diseases such as enteric fever, dysentery, etc., take a heavy toll of health and life amongst the inhabitants year after year and this, without doubt, has been demonstrated to be due to the most unsatisfactory state of drinking water-supplies especially in the rural areas. To wear the people out of their age-long habits of depending upon shallow earthen ring wells and tanks has been the burden of this department since a long time. Government, as already stated elsewhere, have, of course, realised the danger of unsafe and inadequate drinking water-supplies and are taking action to improve matters.

The local bodies are being advised to provide deep masonry wells on sanitary lines to serve as safe sources of drinking water-supplies. The construction of shallow earthen ring wells and tanks which cannot at any time be relied upon as safe sources of drinking water is being discouraged.

In some of the coastal areas of the province, specially which are liable to innundation, the question of supply of good drinking water is somewhat difficult to solve. Wells have been a failure in many such places as they yield brackish water not suitable for drinking purposes. Even deep tube wells have been a failure in these areas. The district boards have, therefore, been advised to protect the tanks excavated for supplying drinking water in these areas by proper fencing and by high embankments to prevent animals and flood water entering therein and to reserve such tanks for drinking purposes only. But their difficulty is the lack of popular enthusiasm and co-operation on the part of a large number of ignorant masses. It is most essential that the local bodies concerned should plan out well-thought-out schemes of rural water-supply by constructing deep masonry wells and the Revenue and Development Departments may also discourage excavation of tanks.

10. **Personal proceedings and office.**—I held charge of the Department throughout the year under report. Rai Sahib Dr. B. Nayak, M.B., D.P.H. (Cal.), also held the post of the Assistant Director of Public Health throughout the year.

11. **Touring.**—I was on tour for 89 days and the Assistant Director of Public Health for 125 days during the year under report.

12. **Conclusion.**—This report deals with the events during the calender year 1940, the 5th year of the existence of Orissa as a separate province, and contains an account of the activities of the Public Health Department under the Government and the local bodies and shows briefly the advancement so far made and the points of public health importance which still await solution, notably the unification of the various laws and rules now in vogue in different parts of the province, the consideration of a comprehensive Public Health Act and also the improvement of the method of collecting vital statistics besides the problem of improving rural sanitation and the provision of an adequate and safe drinking water-supply throughout the province.

I am grateful for the encouragement and help which the department has received from the Government and the co-operation obtained from the officials of other departments of Government and from the local bodies in general without which what little has been achieved in the past would not have been possible, and I have no doubt that there is still further scope for co-operation and co-ordination of efforts.

I would conclude by thanking all the officers in the department, both under Government and the local bodies for thier willing and loyal work which they have carried out often under difficult circumstances and in times of floods and epidemics. I must not fail to appreciate the increasing sense of public health consciousness which has been marked amongst the general public and which, I believe, is a happy augury for the future.

G. VERGHESE, Lt.-Col., I.M.S.,

Director of Health and
Inspector-General of Prisons, Orissa.

Annual Vaccination Report of the Province of Orissa for the year 1940.

Staff.—I held charge of the office of the Director of Health and Inspector-General of Prisons, Orissa, throughout the year under report. Rai Sahib Dr. B. Nayak, M.B., D.P.H. (Cal.), held the office of the Assistant Director of Public Health, Orissa, throughout the year under report.

The provincial vaccination inspecting staff consisted of one Special Health Inspector, one Inspector of Vaccination, four Sub-Inspectors of Vaccination, nineteen Health Inspectors and twenty-seven vaccinators. The total number of vaccinators employed during the year 1940 was 272 of whom 14 were employed in the towns and 258 in the rural areas. Vaccination was performed as usual by paid vaccinators in all the municipal areas in the districts of Ganjam and Koraput and also in Khondmals and licensed vaccinators were employed to perform vaccination in the rest of the areas of the province. Primary vaccination was compulsory in all the municipalities of North Orissa and in the district of Puri whereas in Ganjam plains including the municipalities both primary and revaccination were compulsory. In the Agency areas of Ganjam and Koraput vaccination although free was not compulsory. Compulsory vaccination and revaccination has since been introduced in the union board areas of Koraput district. Compulsory vaccination on licensed system in the lines of Puri scheme has also since been introduced in the rural areas of the districts of Cuttack and Balasore. It is hoped that vaccination will, in the near future, be made compulsory in the areas of the province where it is not so at present. It is most gratifying to note that compulsory vaccination, recently introduced in the rural areas of Cuttack and Balasore districts, is bidding fair to be a success in that the people are willingly coming forward in very large numbers for taking vaccination on account of the compulsory provision of the law now in vogue and the licensed vaccinators are able to receive their small fees without any serious trouble or difficulty.

In the districts where vaccination is not compulsory and is performed on licensed system the licensed vaccinator is allowed to charge a fee of Re. 0-2-0 for each successful vaccination. In the district of Puri where it is compulsory and is performed on licensed system, the vaccinator is allowed to charge a fee of Re. 0-2-0 for each successful vaccination and a fee of Re. 0-4-0 for more than one such vaccination in a family performed at home. Vaccination is, however, given free at the public vaccination depots, which have been located at convenient centres of the district. In the non-compulsory areas, paid vaccinators were also employed as usual by the local bodies for short periods to deal with outbreaks of smallpox. At the time of epidemics of smallpox, temporary paid vaccinators were also appointed by Government.

Operations performed.—747,177 vaccination operations were performed during the year 1940 as against 706,275 during the previous year. This shows an increase of 40,902 in the number of operations as compared with the figures of 1939-40.

738,696 operations were performed by the vaccination staff as against 696,711 done in the preceding year. Of these, 234,753 were primary and 503,943 were revaccinations as against 231,097 primary and 465,614 revaccinations in the preceding year. Although vaccination is generally recognised as the only preventive measure against smallpox, it has not yet become as popular as it should be with the masses in the province steeped down as they are in superstition, ascribing this infection to the visitation of an enraged goddess. It is only when smallpox breaks out in an epidemic form that the people show some degree of willingness to get themselves and their children vaccinated, but when the epidemic is absent the incentive is much less and the number of vaccinations performed also falls accordingly. This, of course, is also to some extent due to the fact that the person vaccinated is called upon to pay for his vaccination. But the

beneficent scheme of compulsory vaccination recently introduced by Government in two of the important districts where it was not compulsory, has considerably changed the mode of vision of the people and they seldom come forward with absurd petitions. It is, however, too early yet to assess the results of this measure for any statistical purposes.

There was an increase of 3,656 in the number of primary operations and an increase of 38,329 in the number of revaccinations carried out during the year under report. Of the number of operations the results of which were known 49·37 per cent were successful as against 53·23 in the previous year. The success data for primary vaccination was 97·83 against 97·23 per cent in the previous year and that for revaccination was 55·02 against 60·41 per cent in the previous year.

Vaccination in the municipalities.—The number of operations performed in the municipalities decreased by 1,007 as compared with the last year's returns. The total number of operations performed was 67,601 and the number of successful operations was 31,072 of which 7,221 were primary and 23,851 revaccinations as against 6,862 and 24,933 respectively in the previous year. The ratios of success in the municipalities were 97·49 per cent for primary operations and 50·84 per cent for revaccinations, as compared with 98·37 per cent and 52·56 per cent respectively in the last year. This and similar health measures will improve and show better results only when the local bodies realise the nature of their true responsibilities in regard to the health of the people committed to their charge and enforce rules and laws of health without fear and favour.

Vaccination in the districts.—The number of operations performed in the rural areas was 671,095 as compared with 628,103 in the preceding year and the ratios of success were 97·84 per cent for primary operations, and 56·34 per cent for revaccination. The districts of Cuttack and Balasore recorded decrease of 4,964 and 4,337 in the number of vaccination operations performed respectively whereas the district of Puri recorded an increase of 23,325 and the persons successfully vaccinated for 1,000 of population in those districts were 33·28, 42·06 and 47·11 respectively. In all these districts vaccination is supervised by the Health Officers of the district boards who are also Superintendents of Vaccination in their respective areas.

Khondmals, Angul and Koraput recorded increase of 1,158, 5,674 and 14,392 respectively in the number of cases vaccinated whilst Sambalpur recorded a decrease of 46,232 and persons successfully vaccinated per 1,000 of population in these districts were 74·30, 66·06, 40·05 and 29·85 respectively. Satisfactory vaccination state of the people in this solitary district where vaccination is not compulsory will improve when compulsory provision of the Vaccination Act is extended to this area. Independent, however, of the extension of the compulsory Act, action is being taken to improve the state of vaccination in the district. The Civil Surgeon of the districts of Cuttack and Ganjam supervised the vaccination of Angul and Khondmals respectively. The Civil Surgeons of Koraput and Sambalpur supervised the vaccination work in their areas.

The district of Ganjam recorded an increase of 52,969 in the number of vaccinations performed and 77·12 per cent were successfully vaccinated per 1,000 of population in the district during the year under report. The vaccination is supervised in the Agency portion of the district by the Civil Surgeon of Ganjam and in plains portion of the district by the District Health Officer, Ganjam. The vaccination state of the people in the Ganjam Agency has been found to be very satisfactory.

Vaccination in towns.—Statement V shows that during the year 1940 children under one year of age out of an available number of 5,848 or 24·62 per cent were successfully vaccinated.

Protection of infants.—During the year under report the number of children under one year in the province available for vaccination was 207,142 and the number of successful operations was 68,818 or 332 per thousand

as against 68,837 or 282 per thousand successful operations out of 243,781 available children during the previous year. The vaccination state of infants in municipalities is separately shown in Statement V. It gives a ratio of 246 per thousand of the surviving infant population as compared with 305 per thousand in the previous year. These figures still remain unsatisfactory in as much as they show that nearly two-thirds of the total number of infants under one year were left unvaccinated, and about three-fourths of the number of infants under one year were left unvaccinated in the municipal areas. This is attributed to the common prejudice of the people against vaccination at an early age. Although primary vaccination is compulsory in all municipal towns and in two districts of the province, viz., Puri and Ganjam, vaccination of the infants and children is not satisfactory. Attempts are being made to improve the state of affairs in the areas, where registration of births is compulsory by maintenance of the proper records showing the unprotected children.

Incidence of mortality of smallpox.—The total number of deaths that occurred from smallpox in the province during the years 1936-37, 1937-38, 1938-39, 1939-40 and 1940 were 3,331, 2,633, 3,065, 4,671 and 5,754 respectively. Thus there has been considerable increase in the number of deaths from the disease during the year under report.

Prevention of smallpox.—The proportion of vaccinated persons in the province still remains far below the figure necessary to effectively prevent outbreaks of the epidemic in the province and the incidence of the disease continues to remain high. This state of affairs is not so much due to insufficiency or inefficiency of the existing arrangements for vaccination in the province as it is to the inherent apathy of the public towards this simple and efficient method of protection by vaccination. But as stated above, this is showing signs of some improvement with the recent introduction of compulsory vaccination in some of the districts which were outside the scope of any compulsory Act.

Smallpox is a preventable disease and vaccination can very successfully prevent it. In the light of this knowledge and in face of the unsatisfactory state of vaccination there is a great necessity for a more vigorous and complete vaccination policy. Vaccination has been made compulsory for may years in all the municipal towns, but all the provisions of the Act do not appear to have been rigidly enforced, with the result that a great proportion of the children do not get vaccination until they cross the first year of their lives. Besides, a large number of unvaccinated persons are to be found in every municipal town. The municipal authorities, it is hoped, will strictly enforce the provisions of the beneficial Act, a responsibility which they ought to discharge without fear or favour. As vaccination has since been made compulsory, besides Puri, in the districts of Cuttack and Balasore and in the union board areas of Koraput and completely free in Khondmals, it is hoped that matters will gradually improve.

The incidence of smallpox can be definitely prevented, provided repeated vaccination is practised, but it is unfortunate that revaccinations are always accepted with reluctance and people do not seem to realise that the immunity conferred by primary vaccination wears out within 5—7 years. Thus during epidemics it is usually found that the percentage of protected persons is small, and until the disease has had its scope the public do not realise the importance of revaccination. Prejudices born of ancient traditions die hard and appear to be the chief obstacles in the way of pushing on vaccination amongst the masses. Much of the efforts of the public health staff has therefore, to be directed towards overcoming these obstacles. Vaccination operations are easily done and generally cause no complications. No case of encephalitis following vaccination has so far been recorded in this province.

Almost all the district boards with a health organisation scheme have now assumed the responsibility of the control of vaccination in the rural areas; but the amount they spend for enforcing the vaccination scheme is very inadequate.

In the rural areas of North Orissa the Bengal Vaccination Act of 1885 was in force in Puri district only. Vaccination and revaccination are compulsory in the plains portion of Ganjam district under the Madras-Local Boards Act of 1920. The Bengal Vaccination Act has since been enforced in the districts of Cuttack and Balasore. Vaccination and revaccination have also since been made compulsory in the union board areas of Koraput district under the Madras Local Boards Act of 1920 as applied to the Agency. It is absolutely necessary that both primary and revaccination should be made compulsory throughout the province.

Inspection of work.—During the year I inspected a large number of vaccination cases, both primary and revaccination, as in the previous year. The Assistant Director of Public Health also inspected a larger number of vaccination cases during the year. The vaccination results on the whole were found to be satisfactory.

In all cases where avoidable wastage of lymph was detected, the cost of the same was realised from the vaccinators concerned.

Mistakes in the technique and deviation from the rules on the part of the vaccination staff wherever observed were pointed out and prompt action was taken to rectify them.

Vaccination outfits were supplied to vaccinators in many areas and steps were taken to remove the minor defects noted in the organisation of the actual work.

The Superintendents of Vaccination of the districts inspected 11,053 primary and 6,354 revaccinations against 10,478 primary and 8,261 revaccinations in the last year. As in the preceding year, the inspection work of the vaccination inspecting staff was satisfactory.

As no arrangement exists in this province for manufacture of vaccine lymph the total requirement of vaccine lymph was purchased from the Vaccine Depot of the Government of Bihar at Namkum and was supplied free of charge to the local bodies of the province. 622,468 doses of vaccine lymph at a cost of Rs. 8,106-6-5 were purchased during the year under report.

A statement showing the quantity of vaccine lymph supplied to the various districts of the province is given below :—

District.	Doses.
Cuttack	186,808
Angul	10,850
Balasore	59,715
Puri	85,480
Sambalpur	44,140
Ganjam plains	153,755
Ganjam Agency including Khondmals	30,270
Koraput	51,450
Total ..	622,468

Method of vaccination.—Vaccination operations are performed with rotary lancets in the districts of Ganjam and Koraput and in some municipalities and with ordinary bleeding lancets in the rest of the province.

Post-vaccination complications.—As in the previous year no complaints of post-vaccinal encephalitis or any other complication after vaccination was received during the year under report.

Cost of the Department.—The total cost of the Vaccination Department excluding the cost of the vaccine lymph during the year as noted in the statement I was Rs. 53,878-1-6 as against Rs. 61,419-10-1 of the previous year.

The cost of each successful case of vaccination during the year was Re. 0-2-4 as against Re. 0-2-7 in the previous year. When, however, the cost of vaccine lymph was taken into account it worked out to Re. 0-2-8 as against Re. 0-2-11½ in the previous year.

General remarks.—I have nothing further to add except to call attention to the remarks already given in the body of the report.

If people and the local authorities would realise that in vaccination we have one of the beneficial discoveries of science in affording absolute protection for all practical purposes against smallpox, much of the indifference and apathy that now exists in the minds of all concerned will vanish and the land will be free from the scourge of this dreadful loathsome disease.

The Government is at present considering the enactment of a unified Vaccination Act for Orissa. It is hoped that this Act will be compiled and brought into force throughout the province at an early date.

G. VERGHESE, Lt.-Col., I.M.S.,

Director of Health and
Inspector-General of Prisons, Orissa.

Summary of the activities of the Public Health Circle relating to the sanitary improvements in rural and urban areas of Orissa during the calendar year 1940.

The Public Health Engineering Works in Orissa during the year were carried out by the Executive Engineers, Southern Division and Ganjam Division, under the direct control of the Special Officer, in charge, Pubic Health Works in Orissa. The following works may be classed as effecting sanitary improvement to the urban and rural areas of the province during the year 1940 :—

Urban areas.

(1) Tube wells near the rockery and tennis court in the compound of Government House, Puri, and providing standposts for married servants quarters at Puri Government House.

(2) Pipe conection to male bathing trough in Cuttack Jail.

(3) Providing austral auto-flushed cabinet in the Lavatory of the Public Works Department Secretariat at Kathjuri Hostel, Cuttack.

(4) Water-supply to the emergency force stationed at Chauliaganj, Cuttack.

(5) Water-supply to the Science Class in Ravenshaw Collegiate School, Cuttack.

(6) Providing tube well in the compound of the Superintendent of Police's residence at Balasore.

(7) Improvement of water-supply to Berhampur Central Jail.

Rural.

Tube well in Barachana police-station, district Cuttack.

H. WHIPP,

Superintending Engineer,
Public Health Circle, Bihar,
in charge of Public Health Works, Orissa.

Summary of the activities of the Public Health Engineering Department in the sanitary improvements in rural and urban areas of Orissa during the calendar year 1940.

The Public Health Engineering Works in Orissa during the year were carried out by the Executive Engineer, Southern Division and Eastern Division, under the direct control of the Special Officer in charge of Public Health Works in Orissa. The following works may be classed as affecting sanitary improvement to the urban and rural areas of the province during the year 1940:—

Urban areas.

(1) Tube wells near the [illegible] in the compound of Government House, Puri, and providing [illegible] for menial servants' quarters at Puri Government House.

(2) Pipe connection to male bathing trough at Cuttack Jail.

(3) Providing [illegible] in the [illegible] Public Works Department [illegible] at [illegible], Cuttack.

(4) Water-supply to the emergency force stationed at Chauliaganj, Cuttack.

(5) Water-supply to the Science Class in Ravenshaw Collegiate School, Cuttack.

(6) Providing tube well in the compound of the Superintendent of Police's residence at Balasore.

(7) Improvement of water-supply to Berhampur Central Jail.

Rural.

Tube well in Baramba police station, district Cuttack.

H. SHEET,
Superintending Engineer,
Public Health Circle, Bihar,
In charge of Public Health Works, Orissa.

Report of the Executive Committee of the Orissa Branch of the British Empire Leprosy Relief Association for the year 1940-41.

The Orissa Branch of the British Empire Leprosy Relief Association (Indian Council) has just completed the fourth year of its existence. The scheme of anti-leprosy work of the Government of Orissa has worked for two years and a half and has thus passed the half way mark of the tentative experimental period of five years.

The main features of the scheme are based on four-fold activities, viz• survey, propaganda, isolation and treatment, and this report records in brief the progress of the work during the year under report under each of these heads.

Survey.

The sample survey carried out in 33 centres by the District Leprosy staff, has revealed during the year under report 2,868 new cases in 1,411 villages, having a total population of 4·81 lakhs, among whome 2·64 lakhs were examined. In 231 schools, both primary and secondary, with 9,441 scholars, 93 cases of leprosy have been detected. These figures indicate an incidence of 1·08 per cent in the population actually examined in the villages and of 1 per cent amongst the students examined. It may be noted that in the year 1939 owing to the social difficulties, examination of the women population could not generally be undertaken in villages by male workers. The Executive Committee, therefore, deemed it necessary to employ some trained lady Leprosy Assistants to work specially among women, and in one urban area so surveyed by a lady assistant and subsequently verified by the District Leprosy Relief Officer, the examination has revealed 34 cases among 1,500 women and children, which presents an incidence of 2·2 per cent. It is, therefore, evident that a special survey among women is essential.

Propaganda.

This aspect of the scheme which aims at educating public opinion by disseminating scientific truths about leprosy, its cause, transmission, course and its remedy, has been tackled in numerous ways. Besides the usual lantern lectures and distribution of specially printed booklets and leaflets through the District Leprosy Staff, a large number of coloured posters were printed for the purpose of propaganda which were displayed with advantage in health exhibitions, towns, *melas* and *hats*. A number of coloured wall charts showing leprosy in its various stages have been permanently pasted in some important Railway platforms in the province, such as Balasore, Bhadrak, Cuttack, Khurda Road, Puri, Berhampur, Jharsugura, Sambalpur, Rambha, Chatrapur, etc., with the permission of the Railway authorities, for which the Committee is thankful to them.

A special feature of propaganda is the observance of a 'Leper Day' every month at the headquarters of the districts as well as in the rural areas and effective demonstrations are arranged to attract the attention of the public and to make them realise their duty regarding this grave social menace.

Treatment.

The treatment of leprosy is considered to be one of the most essential parts of the solution of the problem and much progress has been made in this direction during the last two years. The total number of clinics now working throughout the province is 137 as compared with 115 in the previous year. There has been a steady increase in the admission of new patients as a result of the propaganda work done by the leprosy staff. 1,312 new patients have been treated during the year under report. The total number of patients registered in all the clinics and other survey centres is 15,188. The work in the clinics has been re-organised and improved both in regard to treatment and the maintenance of necessary records. The results of treatment at the clinics

are very encouraging. The percentage of patients deriving perceptible improvement by regular treatment is 87·75. The difficulty encountered at most of the clinics specially in the districts of Balasore and Koraput is the irregularity of the patients in-coming for treatment. This is largely due to the fact that most of the patients live by cultivation and daily wages, and their homes often lie at a great distance from the treatment centres. Moreover, some of the patients get easily discouraged when they fail to find a perceptible improvement after one or two injections. More propaganda is required in this direction.

Isolations.

It must be clearly borne in mind that nothing short of isolation of infectious cases from healthy contacts can successfully eradicate leprosy from a country or a locality. It is therefore isolation, and isolation alone, which should be kept in the forefront of every public spirited individual and every organisation which is interested in anti-leprosy compaign. Survey, propaganda, etc., are only the methods of enlightening the public as well as the staff on the nature and the magnitude of the problem and about the scientific truth regarding the disease. Even treatment has its limited value in so far as it cannot by itself eradicate the evil from the community. Isolation is the only sound method of tackling the problem from the public health point of view. Isolation may be achieved in one of the three following ways, viz., in institutions, in homes and in villages. It will not be out of place to discuss in brief the merits and demerits of all these different methods. Institutions such as leper hospitals or asylums would, undoubtedly, be an ideal method of segregating infectious lepers, but there are unfortunately practical difficulties which stand in the way. The initial and the recurring expenses of a well equipped leper asylum such as the one at Cuttack are prohibitive. It would, therefore, be financially impracticable to multiply such asylums so as to accommodate the innumerable cases of leprosy in the province.

Next comes the method of home isolation which, if properly done, would solve the problem almost as well. But this too has its limited scope in so far as in practice it can be done only by the educated and the well-to-do. Sufficient accommodation in a house is necessary to set apart one room exclusively for the patient, and a proper knowledge of the transmission of the disease and the intelligent co-operation of the patient with his doctor in regard to his treatment are essential in order to achieve the desired result. But the average economic condition and education of the people in Orissa falls far short of these requirements and, therefore, this cannot be universally adopted with satisfactory results.

Lastly is the method of isolation in villages. This method which provides an isolation shed at the outskirt of a village or at a place central to a group of villages, solves the two main difficulties stated above. In the first place the shed requires only a comparatively small outlay. In the second place it is nearer enough to the homes of the patients to avoid any sense of total separation from their families. After a period of treatment in the nearest clinic these patients having become non-infectious may leave their sheds making room for others. At present what is observed by mere treatment is that the majority of cases do show decidedly good results and those who come for treatment sufficiently early, may even pass for all practical pruposes as cured. But none-the-less, without any measure of isolation, the number of lepers in the country remain almost the same, because in the meantime other healthy contacts are infected. It is, therefore, to avoid this difficulty that this method of isolation has been stressed.

Finally, it may once more be repeated that all district boards, district councils, local bodies, social workers and whoever are interested in contributing their quota towards the amelioration of this dreadful disease in Orissa, should never be misled to think that merely by multiplying treatment centres or by constructing clinics alone they will be able to banish this disease. It

may once more be emphasised that isolation should be one of the chief watchwords as complete eradication of the disease should be their aim. Treatment will, however, have its important place in our scheme of anti-leprosy work.

It is gratifying to note that 219 infectious cases have so far been kept in village isolation by pursuation and co-operation of the village leprosy relief committees. Where public sympathy and financial aid is forthcoming, these isolations are gradually developing into colonies. Such colonial isolations are expected to be self-supporting in the long run and efforts are being made with that end in view although the initial and the running expenses for some years will be unavoidable. The Lati Leper Colony in the district of Ganjam which was opened by the Director of Health and Inspector-General of Prisons, Orissa, is a good example of this variety of isolation. The foundation of another colony was laid by His Excellency the Governor of Orissa last year at Junani in the district of Sambalpur and grants have already been made for a third institution at Parlakimedi. At Gunupur, in the district of Koraput, an area of three acres of land has been generously donated by Sri Bebarta for starting a colony and the plans and estimates are almost complete.

In order to popularise village isolation and to bring into existence a number of isolation centres throughout the province the Committee have proposed to construct in suitable villages kutcha-pucca isolation sheds keeping the cost as low as possible so that it may be within the means of local people to follow the example and prepare such sheds for their villages when they understand the utility of this. Accordingly, a grant of Rs. 150 has been made to Kuradhilo, a village with a high incidence of leprosy in the district of Puri. The local pepole have already shown their enthusiasm by constructing a clinic at their own cost and they deserve the help which they have received from the Provincial Association through the Puri District Leprosy Council.

Among these village isolations or colonies, there are two fairly large leper settlements, one at Hatigarah in the district of Balasore, and other at Baragarh in the district of Sambalpur. At Hatigarah Colony the leper population is 98 and at Baragarh the population is 54. These patients, the majority of whom have parctically settled with their familes in these colonies, maintain themselves by cultivation and daily wages although a few depend upon local charity.

In addition to these village isolations some 293 patients are in home isolations scattered all over the province, and they live separately from their family members in special rooms set apart for them in their houses.

There are two leper asylums or hospitals in the province, viz., the Cuttack Leper Asylum with an accommodaton for 420 and the Puri Leper Colony accommodating 80. Attempts are being made to expand the Colony at Puri mainly with the generous help promised by Mahant Maharaj of Emar Math.

Out of 5,445 infectious lepers who have been registered so far some 1,150 patients are in isolation. This includes 367 cases isolated in the year under report. This is greatly encouraging and we may hope that by the multiplication of isolation centres every year we may be able to control the spread of the disease.

District Leprosy Relief Councils.

With the exception of Sambalpur all the remaining District Leprosy Relief Councils have been affiliated to the Provincial Council on payment of 20 per cent of all collections realised by them, and further they have been advised to get their Councils registered under the Societies Act.

These District Councils which are now at various stages of evolution have been trying their best to promote the cause of anti-leprosy compaign in their respective districts.

From the reports received from these Councils seen that excepting Ganjam other districts have not made much progress in the prosecution of

the scheme. It is gratifying to note, however, that the District Leprosy Relief Council of Balasore and Koraput have raised substantial funds during the year under report from donations and public subscriptions.

It will be too numerous to mention all the village leprosy relief committees which have been formed in rural areas through the efforts of the leprosy staff, to help in effecting the village isolations. In this respect the work of some of these committees is highly praise-worthy and we hope that other committees will follow their example.

Working of the Executive Committee.

The Executive Committee met six times in the year under report in the months of January, April, August, September and December 1940 and March 1941.

The Director of Health and Inspector-General of Prisons, Orissa, continued to remain as the ex-officio Chairman of the Executive Committee and Rai Bahadur Dr. J. Rao, L. R. C. S. (Edin.), was the Honorary Secretary of the Association throughout the year under report. Rev. E. R. Lazarus, having resigned the Honorary Treasurership, Rai Bahadur Uma Charan Das, B.A., M.B.E., was nominated by His Excellency, the President of the Council, at the annual general meeting of the Association held on the 14th May 1940 and was further elected by the Council to be the Honorary Treasurer. On expiry of three years' membership of Rai Sahib Giridhari Lal Moda on the Executive Committee, Rai Bahadur Radha Charan Das was taken as co-opted member.

The following important business was transacted in the year under report :—

1. Appointment of lady Leprosy Assistants in the districts of Ganjam and Balasore.

2. Sanction of Rs. 1,000 made to the President, District Leprosy Relief Council, Sambalpur for the purpose of an Isolation Colony at Junani in the district of Sambalpur.

3. A sum of Rs. 450 was given to the Joint Honorary Secretary of the Ganjam District Leprosy Relief Council for food and clothing of poor leper patients in the district.

4. A sum of Rs. 100 was given to the Joint Honorary Secretary, Ganjam District Leprosy Relief Council, for the purpose of purchasing a milch cow for the inmates of the Lati Leper Colony.

5. A sum of Rs. 400 was paid in two instalments to the Civil Surgeon, Balasore, for the purpose of Hatigarah, Bhadrak and Sadr leprosy clinics.

6. Rs. 200, was given to the Secretary, Jajpur Leprosy Clinic, for the purpose of a leper shed in the compound of the Jajpur dispensary.

7. Rs. 200 was paid to the Collector, Cuttack, for the purpose of construction of a leper shed in the compound of the Banki dispensary.

Finance.

Income and expenditure account for the year ending 31st March 1941.

Income.

	Rs.	a.	p.
1. Grant from the Orissa Government for 1940-41 ..	28,206	0	0
2. Grant from the British Empire Leprosy Relief Association (Indian Council), New Delhi.	1,137	8	0
3. Twenty per cent subscription from the District Leprosy Relief Councils.	305	6	4
4. Subscription from oridinary Members			
5. Subscription from supporting Members	75	0	0
6. Interest received from Defence Bonds	8	0	0
7. Interest received from Savings Bank Deposit ..	186	6	0
8. Balance of Imprest Account not shown in the Balance Sheet on 31st March 1940.	22	8	0
	22	11	6
Grand Total	29,963	7	10

Expenditure	Rs.	a.	p.
1. Pay and allowance of the Leprosy Association Staff	13,445	13	0
2. Propaganda materials	250	2	0
3. Purchase of medicines	1,203	0	3
4. Grant in aid of leper colonies	1,100	0	0
5. Special contribution to districts—Balasore Rs. 400, Cuttack Rs. 400.	800	0	0
6. Grant in aid of clinics	74	4	0
7. Office contingencies of the District Leprosy staff	420	0	0
8. Imprest given to the Provincial Leprosy Relief Officer, Orissa.	30	0	0
9. Amount given for food and clothing of leper patients in Ganjam.	450	0	0
10. Registration fee	50	0	0
11. Ten per cent subscription to be paid to the British Empire Leprosy Relief Association, New Delhi.	152	11	2
12. Postage	96	8	3
13. Printing, stationery	30	5	10½
14. Miscellaneous expenses	17	12	4½
15. Electric power for the annual meeting of the Association for 1939-40.	12	12	0
16. *Depriciation.*—			
(*a*) Typewriter	13	8	0
(*b*) Magic Lanterns, etc.	114	0	0
17. Net surplus for the year	11,702	10	11
Grand Total ..	29,963	7	10

A separate audit report for the year 1940-41 has been printed and is laid on the table, perusal of which will explain how we stand in regard to finance.

Conclusion.

In reviewing the activities connected with the anti-leprosy campaign in Orissa during the year under report, it is gratifying to feel that we have made some satistactory progress in our work. Much remains yet to be done, especially with regard to the isolation of infectious cases which is very important and which we have stressed in our report.

We take this opportunity to appeal to the general public for their generous financial support and we hope that during the next year we shall be able to add greatly to the present number of Life-Members and Ordinary and Associate Members.

A careful study of the report will give some idea not only as to what has been already accomplished so far, but also as to the prodigious problem which awaits solution if our aim should be, to rid Orissa of leprosy, as it should be, as it is still one of the major public health problems in the province.

We are grateful to all our donors, and we take this opportunity to express our gratitude and thanks to His Excellency Sir John Hubback who was the President of our Provincial Association during the period covered in this

report and also to Lady Hubback, for the many ways in which they helped and encouraged us. We also thank the members of the Orissa Women's League of Service for their help, and all the local bodies, and also all the ladies and gentlemen who have assisted us in various ways. We also thank the members of the Medical and Public Health Department including those under the employment of the local bodies for their keen interest in the work, and we should not forget to thank our own leprosy staff for the good work which they have done during the year.

Finally, we thank the Imperial Bank of India, Cuttack, and the Auditor Sri R. K. Das for their help.

We look forward to a better year.

J. RAO,

Honorary Secretary.

G. VERGHESE, Lt.-Col., I.M.S.,

Chairman (Executive Committee).

APPENDIX I.

Annual Form No. I.

ANNUAL FORM NO. I.—*Births registered in th…*

1	2	3			4		
No.	Districts.	Population for which returns were received.			Number of births registered.		
		Male.	Female.	Total.	Male.	Female.	Total.
1	Cuttack	1,028,134	1,148,573	2,176,707	42,660	39,913	82,57…
2	Balasore	480,518	510,082	990,600	18,684	17,626	36,310
3	Puri	500,214	534,940	1,035,154	19,077	17,779	36,856
4	Sambalpur	522,140	543,470	1,065,610	19,428	18,255	37,683
5	Angul	68,694	71,764	140,458	3,205	3,070	6,275
6	Khondmals	40,231	42,047	82,278	1,656	1,603	3,259
7	Ganjam Plains	581,070	707,404	1,288,474	24,490	23,007	47,497
	AGENCY DISTRICTS.						
8	Ganjam	131, 493	135,168	266,661	1,206	1,210	2,416
9	Koraput	13,830	13,925	27,755	366	333	699
	Total of Agency districts ...	145,323	149,093	294,416	1,572	1,543	3,115
	Total for the Province ...	3,366,324	3,707,373	7,073,697	130,772	122,796	253,5…

DIX I.

districts of Orissa Province during the year 1940.

5			6			7
Ratio of births per 1,000 of population.			Mean ratio of births per 1,000 during previous five years.			No.
Male.	Female.	Total.	Male.	Female.	Total.	
19·60	18·34	37·94	17·74	16·76	34·50	1
18·86	17·79	36·65	16·68	15·60	32·28	2
18·43	17·17	35·60	18·60	17·54	36·14	3
18·23	17·13	35·36	...	...	...	4
22·82	21·86	44·68	...	..	...	5
20·18	19·48	39·61	...	...	...	6
19·01	17·85	36·86	...	...	...	7
4·52	4·54	9·06	...	...	...	8
13·18	12·00	25·18	...	...	...	9
5·34	5·24	10·58	...	...	...	
18·49	17·36	35·85	...	...	...	

ANNUAL FORM No. I-A.—*Births registered according to class in each tow*

1	2			3		
Registering circle.	Christians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.						
Cuttack town ...	22	23	45	970	850	1,82
Kendrapara town ...	...	...	...	144	154	29
Jajpur town ...	...	...	...	104	104	20
Total of towns ...	22	23	45	1,218	1,108	2,32
Total of rural ...	...	...	...	40,263	37,769	78,03
Total of district ...	22	23	45	41,481	38,877	80,358
BALASORE.						
Balasore town ...	5	9	14	103	102	20
Total of rural ...	8	7	15	17,655	16,647	34,302
Total of district ...	13	16	29	17,758	16,749	34,507
PURI.						
Puri town ...	3	2	5	576	536	1,112
Total of rural ...	13	8	21	18,202	16,970	35,172
Total of district ...	16	10	26	18,778	17,506	36,284
SAMBALPUR.						
Sambalpur town ...	...	...	...	184	161	345
Total of rural ...	...	...	...	19,244	18,094	37,338
Total of district ...	...	...	...	19,428	18,255	37,683
ANGUL.						
Total of rural ...	...	...	...	3,205	3,070	6,275
Total of district ...	...	...	...	3,205	3,070	6,275
KHONDMALS.						
Total of rural ...	...	1	1	515	525	1,040
Total of district ...	...	1	1	515	525	1,040
GANJAM PLAINS.						
Berhampur town ...	14	14	28	764	703	1,467
Parlakimedi town ...	...	2	2	372	322	694
Total of towns ...	14	16	30	1,136	1,025	2,161
Total of rural ...	35	39	74	23,141	21,790	44,931
Total of distric ...	49	55	104	24,277	22,815	47,092
AGENCY DISTRICTS.						
Ganjam ...	31	28	59	1,151	1,170	2,321
Koraput ...	14	16	30	336	303	689
Total of Agency districts ...	45	44	89	1,487	1,473	2,960
Total for the Province — Towns ...	44	50	94	3,217	2,932	6,149
Total for the Province — Rural ...	101	99	200	123,712	116,338	240,050
Total for the Province — Districts ...	145	149	294	126,929	119,270	246,199

and rural areas in the districts of Orissa Province during the year 1940.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
185	179	364	...	...	...	...	...	...	1,177	1,052	2,229
37	47	84	...	...	...	...	...	...	181	201	382
10	8	18	...	...	...	...	...	...	114	112	226
232	234	466	...	...	...	...	...	...	1,472	1,365	2,837
925	779	1,704	...	...	...	...	...	...	41,188	38,548	79,736
1,157	1,013	2,170	...	...	...	...	...	...	42,660	39,913	82,573
49	37	86	...	...	...	...	...	...	157	148	305
509	489	998	...	...	...	355	335	690	18,527	17,478	36,005
558	526	1,084	...	...	...	355	335	690	18,684	17,626	36,310
...	4	4	...	...	...	...	...	..	579	542	1,121
282	252	534	...	...	...	1	7	8	18,498	17,237	35,735
282	256	538	...	...	...	1	7	8	19,077	17,779	36,856
...	...	...	...	...	...	...	...	...	184	161	345
...	...	...	...	...	...	...	...	...	19,244	18,094	37,338
...	...	...	...	...	...	...	...	...	19,428	18,255	37,683
...	...	...	...	...	...	...	...	...	3,205	3,070	6,275
...	...	...	...	...	..	...	...	...	3,205	3,070	6,275
...	...	...	...	...	...	1,141	1,077	2,218	1,656	1,603	3,259
...	...	...	...	...	...	1,141	1,077	2,218	1,656	1,603	3,259
31	18	49	...	...	...	75	61	136	884	796	1,680
5	11	16	...	...	...	...	...	...	377	335	712
36	29	65	...	...	...	75	61	136	1,261	1,131	2,392
26	27	53	...	...	...	27	20	47	23,229	21,876	45,105
62	56	118	...	...	...	102	81	183	24,490	23,007	47,497
...	...	...	...	...	...	24	12	36	1,206	1,210	2,416
16	12	28	...	...	...	...	2	2	366	333	699
16	12	28	...	...	...	24	14	38	1,572	1,543	3,115
317	304	621	...	...	...	75	61	136	3,653	3,347	7,000
1,758	1,559	3,317	...	...	...	1,548	1,453	3,001	127,119	119,449	246,568
2,075	1,863	3,938	...	...	...	1,623	1,514	3,137	130,772	122,796	253,568

ANNUAL FORM NO. IB.—*Still births registered according to class in each town*

1	2			3		
Registering circle.	Chirstians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.						
Cuttack town	...	...	...	13	15	28
Kendrapara town	...	...	...	7	5	12
Jajpur town	...	...	...	...	...	...
Total of towns ...	...	...	...	20	20	40
Total of rural ...	...	...	...	2,871	2,341	5,212
Total of district ...	...	...	...	2,891	2,361	5,252
BALASORE.						
Balasore town	...	...	...	4	2	6
Total of rural ...	1	...	1	1,574	1,372	2,946
Total of district ...	1	...	1	1,578	1,374	2,952
PURI.						
Puri town	...	...	...	26	12	38
Total of rural ...	...	...	...	1,696	1,339	3,035
Total of district ...	...	...	...	1,722	1,351	3,073
SAMBALPUR.						
Sambalpur town	...	...	...	...	...	...
Total of rural ...	...	...	...	84	53	137
Total of district ...	...	...	...	84	53	137
ANGUL.						
Total of rural ...	...	...	...	58	35	93
Total of district ...	...	...	...	58	35	93
KHONDMALS.						
Total of rural ...	...	...	...	4	8	12
Total of district ...	...	...	...	4	8	12
GANJAM PLAINS.						
Berhampur town	...	...	...	25	15	40
Parlakimedi town	1	...	1	19	11	30
Total of towns ...	1	...	1	44	26	70
Total of rural ...	3	3	6	207	144	351
Total of district ...	4	3	7	251	170	421
AGENCY DISTRICTS.						
Ganjam	...	...	...	6	5	11
Koraput	...	...	...	5	9	14
Total of Agency districts ...	...	...	...	11	14	25
Total for the Province — Towns ...	1	...	1	94	60	154
Total for the Province — Rural ...	4	3	7	6,505	5,306	11,811
Total for the Province — Districts ...	5	3	8	6,599	5,366	11,965

DIX I—*contd.*

and rural areas in the districts of Orissa Province during the year 1940.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	1	2	...	...	...	...	...	...	14	16	30
...	...	...	...	...	...	...	...	...	7	5	12
...	...	...	...	...	...	...	...	...	...	...	...
1	1	2	...	...	...	...	...	...	21	21	42
39	27	66	...	...	...	...	...	...	2,910	2,368	5,278
40	28	68	...	...	...	...	...	...	2,931	2,389	5,320
...	...	...	...	...	...	...	...	...	4	2	6
2	1	3	...	...	...	4	1	5	1,581	1,374	2,955
2	1	3	...	...	...	4	1	5	1,585	1,376	2,961
...	...	...	...	...	...	...	...	...	26	12	38
7	6	13	...	...	...	...	...	...	1,703	1,345	3,048
7	6	13	...	...	...	...	...	...	1,729	1,357	3,086
...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	84	53	137
...	...	...	...	...	...	...	...	...	84	53	137
...	...	...	...	...	...	...	...	...	58	35	93
...	...	...	...	...	...	...	...	...	58	35	93
1	...	1	...	...	...	22	25	47	27	33	60
1	...	1	...	...	...	22	25	47	27	33	60
1	...	1	...	...	...	2	...	2	28	15	43
...	...	...	...	...	...	...	...	...	20	11	31
1	...	1	...	...	...	2	...	2	48	26	74
3	4	7	...	...	...	7	4	11	220	155	375
4	4	8	...	...		9	4	13	268	181	449
...	...	...	...	...	...	2	...	2	8	5	13
...	...	...	...	...	...	...	1	1	5	10	15
...	...	...	...	...	...	2	1	3	13	15	28
2	1	3	...	...	...	2	...	2	99	61	160
52	38	90	...	...	...	35	31	66	6,596	5,378	11,974
54	39	93	...	...	...	37	31	68	6,695	5,439	12,164

ANNUAL FORM No. II.—*Statement of deaths registered*

1	2	3	4	5		
				Number of deaths registered.		
No.	Districts.	Area in square miles.	Average population per square mile.	Male.	Female.	Total.
1	Cuttack	3,654	595	27,421	28,089	55,510
2	Balasore	2,055	482	12,714	13,602	26,316
3	Puri	2,492	415	13,751	13,758	27,509
4	Sambalpur	5,394	198	13,302	11,718	25,020
5	Angul	881	159	1,921	1,855	3,776
6	Khondmals	800	103	1,318	1,248	2,566
7	Ganjam Plains	3,469	271	15,835	15,683	31,518
	AGENCY DISTRICTS.					
8	Ganjam	2,630	101	1,066	968	2,034
9	Koraput	117	237	330	274	604
	Total of Agency districts ...	2,747	338	1,396	1,242	2,638
	Total for the Province ...	21,492	329	87,658	87,195	174,853

DIX I—*contd.*

in the districts of Orissa Province during the year 1940.

6											7		
Death rate per 1,000 of population from—											Mean ratio of deaths per 1,000 during previous five years.		
								All causes.					
Cholera.	Smallpox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.	Total.	Male.	Female.	Total.
0·66	1·67	...	11·01	2·96	0·60	0·50	8·10	26·67	24·46	25·50	32·01	29·87	30·88
0·99	0·42	...	16·06	0·52	0·09	0·53	7·96	26·46	26·67	26·56	31·66	31·81	31·73
0·68	0·63	...	11·15	2·76	0·97	0·45	9·93	27·49	25·71	26·57	30·35	29·17	29·74
0·10	0·25	...	18·20	1·11	1·13	0·83	7·36	25·48	21·56	23·48	...	...	...
0·08	0·04	...	22·28	0·28	0·16	0·69	8·45	27·96	25·85	26·88	...	...	...
0·15	0·01	...	27·80	0·17	0·01	0·43	2·62	32·76	29·68	31·19	...	...	...
0·44	0·49	...	13·62	1·44	0·65	0·21	7·61	27·25	22·17	24·46	...	...	...
0·16	0·26	...	5·81	0·18	0·30	0·11	0.81	8·10	7·16	7·63	...	...	...
1·58	2·95	...	7·98	1·91	1·55	0·58	5·26	23·86	19·68	21·76	...	...	...
0·29	0·52	...	6·01	0·34	0·42	0·15	1·23	9·61	8·33	8·96	...	...	...
0·55	0·81	...	12·75	1·84	0·65	0·41	7·71	26·04	23·52	24·72	...	...	...

ANNUAL FORM NO. III.—*Deaths registered in the districts of*

1	2		3	4	5	6	7	8
No.	Districts.		Population according to census, 1931.	January.	February.	March.	April.	May.
1	Cuttack district ...	Urban ...	88,556	180	136	161	109	103
		Rural ...	2,088,151	6,694	5,254	4,451	4,227	4,281
		Total ...	2,176,707	6 874	5,390	4,612	4,336	4,384
2	Balasore district ...	Urban ...	17,843	43	24	27	27	30
		Rural ...	972,757	3,420	2,311	1,848	1,871	1,662
		Total ...	990,600	3,463	2,335	1,875	1,898	1,692
3	Puri district ...	Urban ...	37,568	95	110	87	88	99
		Rural ...	997,586	3,015	2,429	1,981	2,078	2,031
		Total ...	1,035,154	3,110	2,539	2,038	2,125	2,130
4	Sambalpur district ...	Urban ...	15,017	36	28	23	19	22
		Rural ...	1,050,593	2,639	1,930	2,018	2,148	2,035
		Total ...	1,065,610	2,705	1,958	2,041	2,167	2,057
5	Angul district ...	Rural ...	140,458	400	250	335	425	350
		Total ...	140,458	400	250	335	425	350
6	Khondmals district ...	Rural ...	82,278	200	190	223	214	270
		Total ...	82,278	200	190	223	214	270
7	Ganjam district (Plains) ...	Urban ...	57,822	121	97	117	103	103
		Rural ...	1,230,652	2,512	1,822	1,819	2,150	2,028
		Total ...	1,288,474	2,633	1,919	1,936	2,253	2,131
	AGENCY DISTRICTS.							
8	Ganjam	...	266,661	207	161	159	212	187
9	Koraput	...	27,755	37	24	23	39	51
	Total of Agency districts ...	...	294,416	244	185	182	251	238
	Total for the Province	Urban ...	216,806	475	395	415	346	357
		Rural ...	6,856,891	19,154	14,371	12,857	12,323	12,895
		Total ...	7,073,697	19,629	14,766	13,272	13,669	13,252
	Ratio per 1,000 of population.	Urban ...	...	2·19	1·82	1·91	1·60	1·65
		Rural ...	...	2·79	2·10	1·87	1·94	1·18
		Total ...	...	2·77	2·09	1·88	1·93	1·87

Orissa Province during each month of the year 1940.

9	10	11	12	13	14	15	16	1
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
94	150	154	178	134	220	235	1,854	
2,931	3,605	3,631	3,816	3,975	4,871	5,920	53,656	1
3,025	3,755	3,785	3,994	4,109	5,091	6,155	55,510	
19	14	19	15	18	52	37	325	
1,366	1,621	1,889	2,076	2,296	2,521	3,110	25,991	2
1,385	1,635	1,908	2,091	2,314	2,573	3,147	26,316	
107	119	112	117	134	171	141	1,380	
1,794	2,037	1,821	1,867	1,900	2,364	2,853	26,129	3
1,901	2,156	1,933	1,984	2,034	2,535	2,994	27,509	
21	19	36	22	17	20	20	283	
1,533	1,719	1,953	2,262	2,094	2,057	2,319	24,737	
1,554	1,738	1,989	2,284	2,111	2,077	2,339	25,020	
258	281	327	305	285	263	297	3,776	5
258	281	327	305	285	263	297	3,776	
200	214	211	216	216	200	212	2,566	6
200	214	211	216	216	200	212	2,566	
96	138	179	134	115	133	140	1,476	
2,114	2,614	2,775	2,595	2,708	3,103	3,802	30,042	7
2,210	2,752	2,954	2,729	2,823	3,236	3,942	31,518	
146	145	199	168	164	146	145	2,034	8
50	40	48	49	64	89	90	604	9
196	185	247	212	228	235	235	2,638	
337	440	500	466	418	596	573	5,318	
10,392	12,276	12,854	12,849	13,702	15,614	18,748	169,535	
10,729	12,716	13,354	13,315	14,120	16,210	19,321	174,853	
1·55	2·03	2·34	2·15	1·93	2·75	2·64	24·58	
1·52	1·79	1·87	1·95	2·00	2·28	2·73	24·72	
1·52	1·80	1·89	1·95	2·00	2·29	2·73	24·72	

ANNUAL FORM No. IV. —*Deaths registered according to age in the*

No.	District.		Not exceeding one month. Male. Under one week.	Over one week.	Total.	Female. Under one week.	Over one week.	Total.	Death under … Total of columns 3 and 6.
1	2		1	2	3	4	5	6	7
1	Cuttack district ...	Urban ...	93	48	144	70	41	111	255
		Rural ...	2,208	1,566	3,769	1,764	1,191	2,955	6,724
		Total ...	2,299	1,614	3,918	1,834	1,232	3,066	6,979
2	Balasore District ...	Urban ...	15	11	26	13	6	19	45
		Rural ...	1,209	865	2,074	1,027	701	1 728	3,802
		Total ...	1,224	876	2,100	1,040	707	1,747	3,847
3	Puri district ...	Urban ...	39	36	75	30	27	57	132
		Rural ...	1,014	854	1,868	835	733	1,568	3,436
		Total ...	1,053	890	1,943	865	760	1,625	3,568
4	Sambalpur district ...	Urban ...	10	10	20	4	6	10	30
		Rural ...	1,164	1,029	2,193	1,012	854	1,866	4,059
		Total ...	1,174	1,039	2,213	1,016	860	1,876	4,089
5	Angul district ...	Rural ...	126	149	275	116	121	237	512
		Total ...	126	149	275	116	121	237	512
6	Khondmals district ...	Rural ...	79	54	133	70	57	127	260
		Total ...	79	54	133	70	57	127	260
7	Ganjam district (Plains) ...	Urban ...	67	26	93	58	26	84	177
		Rural ...	1,194	1,133	2,327	974	951	1 925	4,259
		Total ...	1,261	1,159	2,420	1,032	977	2,009	4,429
	AGENCY DISTRICTS.								
8	Ganjam	...	50	40	90	33	30	63	153
9	Koraput	...	20	11	31	9	11	20	51
	Total of Agency districts ...	...	70	51	121	42	41	83	204
	Total for the Province	Urban ...	227	131	358	175	106	281	639
		Rural ...	7,059	5,701	12,760	5,840	4,649	10,489	23,249
		Total ...	7,286	5,832	13,118	6,015	4,755	10,770	23,888

DIX I—*contd.*

districts of Orissa Province during the year 1940.

3									
one year.									
Over one month and not exceeding six months.			Over six months and not exceeding twelve months.			Total male columns 3, 8 and 11.	Total female columns 6, 9 and 12.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
8	9	10	11	12	13	14	15	16	
76	59	135	35	41	76	255	211	466	1
2,641	2,385	5,026	991	1,096	2,087	7,401	6,436	13,837	
2,717	2,444	5.161	1,026	1 137	2,163	7,656	6,647	14,303	
6	7	13	2	4	6	34	30	64	2
1,198	1,178	2,376	364	366	730	3,636	3,272	3,803	
1,204	1,185	2,389	366	370	736	3,670	3,302	6,972	
33	28	61	16	16	32	124	101	225	3
1,165	997	2,162	506	426	932	3.539	2,991	6,530	
1,198	1,025	2 223	522	442	964	3,663	3,092	6,755	
8	6	14	...	7	7	28	23	51	4
878	728	1,606	421	367	788	3,492	2,961	6,453	
886	734	1,620	421	374	795	3,520	2,984	6,504	
163	164	327	104	92	196	542	493	1,035	5
163	164	327	104	92	196	542	493	1,035	
170	174	344	104	85	189	407	386	793	6
170	174	344	104	85	189	407	386	793	
62	50	112	29	28	57	184	162	346	7
1,391	1,227	2,618	1,158	1,115	2,273	4.876	4,267	9,143	
1,453	1,277	2,730	1,187	1,143	2,330	5,060	4,429	9.489	
90	86	176	67	69	136	247	218	465	8
16	16	32	15	12	27	62	48	110	
106	102	208	82	81	163	309	266	575	
185	150	335	82	96	178	625	527	1,152	
7,712	6,955	14,667	3,730	3,628	7,358	24,202	21,072	45,274	
7,897	7,105	15,002	3,812	3,724	7,536	24,827	21,599	46,426	

ANNUAL FORM NO. IV.—*Deaths registered according to age in the*

1	2		3		4		5		6	
No.	District.		1 year and under 5 years.		5 years and under 10 years.		10 years and under 15 years.		15 years and under 20 years	
			Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
			17	18	19	20	21	22	23	24
1	Cuttack district ...	Urban ...	95	112	38	29	16	15	84	41
		Rural ...	3,762	3,790	1,411	1,421	616	581	788	1,005
		Total ...	3,857	3,902	1,449	1,450	632	596	882	1,046
2	Balasore district ...	Urban ...	7	6	1	4	5	8	1	9
		Rural ...	1,218	1,322	503	503	303	279	388	594
		Total ...	1,225	1,328	504	507	308	287	389	603
3	Puri district ...	Urban ...	52	62	22	16	13	16	14	18
		Rural ...	1,741	1,883	610	588	300	248	305	455
		Total ...	1,793	1,945	632	604	313	264	319	473
4	Sambalpur district ...	Urban ...	19	16	12	8	9	3	4	5
		Rural ...	1,937	1,761	644	579	383	298	413	437
		Total ...	1,956	1,777	6[illegible]6	587	392	301	417	442
5	Angul district ...	Rural ...	382	364	140	90	67	51	35	51
		Total ...	382	364	140	90	67	51	35	51
6	Khondmals district ...	Rural ...	195	183	71	53	40	44	36	42
		Total ...	195	183	71	53	40	44	36	42
7	Ganjam district (Plains)	Urban ...	114	89	32	33	20	27	17	25
		Rural ...	2,097	2,132	725	797	415	351	386	431
		Total ...	2,211	2,221	757	830	435	378	403	456
	AGENCY DISTRICTS.									
8	Ganjam	...	136	141	58	52	40	28	30	26
9	Koraput	...	35	28	15	13	15	8	6	15
	Total of Agency districts ...	...	171	169	73	65	55	36	36	41
	Total for the Province...	Urban ...	287	285	105	90	63	69	70	98
		Rural ...	11,503	11,604	4,177	4,096	2,179	1,888	2,387	3,056
		Total ...	11,790	11,889	4,282	4,186	2,242	1,957	2,457	413,5

DIX I—*contd.*

districts of Orissa Province during the year 1940.

7		8		9		10		11		1
20 years and under 30 years.		30 years and under 40 years.		40 years and under 50 years.		50 years and under 60 years.		60 years and upwards.		No.
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
25	26	27	28	29	30	31	32	33	34	
95	99	105	67	98	66	101	81	146	150	1
2,117	3,028	2,170	2,303	2,049	1,804	2,346	2,539	3,778	4,311	
2,212	3,127	2,275	2,370	2,147	1,870	2,447	2,620	3,924	4,461	
27	23	27	23	27	16	21	13	23	20	2
1,076	1,729	1,338	1,457	1,296	1,163	1,260	1,253	1,523	1,778	
1,103	1,752	1,365	1,480	1,323	1,179	1,281	1,366	1,546	1,798	
88	55	65	40	94	66	102	55	228	199	3
966	1,351	1,014	1,090	1,187	983	1,407	1,357	1,930	2,184	
1,004	1,406	1,079	1,130	1,281	1,049	1,509	1,412	2,158	2,383	
18	21	26	18	15	8	11	12	15	12	4
1,036	1,144	1,136	927	1,041	762	1,338	1,043	1,725	1,680	
1,054	1,165	1,162	945	1,056	770	1,349	1,055	1,740	1,692	
112	131	146	126	136	109	154	167	207	273	5
112	131	146	126	136	109	154	167	207	273	
71	77	112	113	149	100	114	122	123	128	6
71	77	112	113	149	100	114	122	123	128	
56	56	76	55	74	46	83	47	124	156	7
901	1,087	1,136	1,028	931	746	1,234	1,220	2,354	2,918	
[illegible]	1,143	1,212	1,093	1,005	792	1,317	1,267	2,478	3,074	
57	85	129	114	115	88	121	87	133	129	8
37	42	39	32	45	17	34	23	42	48	9
94	127	168	146	160	105	155	110	175	177	
234	254	299	203	308	202	318	208	586	587	
6,373	8,674	7,220	7,200	6,949	5,772	8,008	7,911	11,815	13,449	
6,607	8,928	7,519	7,403	7,257	5,974	8,326	8,119	12,351	13,986	

ANNUAL FORM No. IV-A.—*Deaths under one year registered according to class in each town*

1	2			3		
Registering circle.	Christians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
CUTTACK.						
Cuttack town	4	5	9	163	118	281
Kendrapara town	...	...	...	33	45	78
Jajpur town	...	...	...	16	12	28
Total of towns ...	4	5	9	212	175	387
Total of rural ...	...	...	...	7,247	6,318	13,565
Total of district ...	4	5	9	7,459	6,493	13,952
BALASORE.						
Balasore town	...	...	...	29	28	57
Total of rural ...	...	1	1	3,618	3,261	6,879
Total of district ...	...	1	1	3,647	3,289	6,936
PURI.						
Puri town	...	...	...	124	101	225
Total of rural ..	...	...	...	3,498	2,970	6,468
Total of district ...	...	...	...	3,622	3,071	6,693
SAMBALPUR.						
Sambalpur town	...	...	...	28	23	51
Total of rural ...	...	...	...	3,492	2,961	6,453
Total of district ...	...	...	...	3,520	2,984	6,704
ANGUL.						
Total of rural ...	...	...	...	542	493	1,035
Total of district ...	...	...	...	542	493	1,035

DIX I—*contd.*

nd rural areas in the districts of Orissa Province during the year 1940—contd.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total	Male.	Female.	Total.
28	21	49	...	...	...	...	...	...	195	144	339
11	10	21	...	...	...	...	...	...	44	55	99
...	...	...	...	...	...	...	...	...	16	12	28
39	31	70	...	...	...	...	...	...	255	211	466
154	118	272	...	...	...	...	...	...	7,401	6,486	13,837
193	149	342	...	...	...	...	...	...	7,656	6,647	14,303
5	2	7	...	...	...	...	...	...	34	30	64
11	6	17	...	...	...	7	4	11	3,636	3,272	6,908
16	8	24	...	...	...	7	4	11	3,670	3,302	6,972
...	...	...	...	...	...	...	...	...	124	101	225
41	21	62	...	...	...	...	...	...	3,539	2,991	6,530
41	21	62	...	...	...	...	...	...	3,663	3,092	6,755
...	...	...	...	...	...	...	...	...	28	23	51
...	...	...	...	...	...	...	...	...	3,492	2,961	6,453
...	...	...	...	...	...	...	...	...	3,520	2,984	6,504
...	...	...	...	...	...	...	...	...	542	493	1,035
...	...	...	...	...	...	...	...	...	542	493	1,035

ANNUAL FORM No. IV-A.—*Deaths under one year registered according to class in each town*

1	2				3	
Registering circle.	Christians.			Hindus.		
	Male.	Female.	Total.	Male.	Female.	Total.
KHONDMALS.						
Total of rural ...	...	...	...	100	109	209
Total of district ...	...	...	...	100	109	209
GANJAM PLAINS.						
Berhampur town	1	1	2	127	105	232
Parlakimedi town	...	...	...	47	51	98
Total of towns ...	1	1	2	174	156	330
Total of rural ...	2	3	5	4,855	4,248	9,103
Total of district ...	3	4	7	5,029	4,404	9,433
AGENCY DISTRICTS.						
Ganjam	1	1	2	243	213	456
Koraput	1	2	3	59	45	104
Total of Agency districts ...	2	3	5	302	258	560
PROVINCE.						
Total for the Province ... Towns ...	5	6	11	567	483	1,050
Total for the Province ... Rural ...	4	7	11	23,654	20,618	44,272
Total for the Province ... District ...	9	13	22	24,221	21,101	45,322

DIX I—*contd.*

and rural areas in the districts of Orissa Province during the year 1940—concld.

4			5			6			7		
Muhammadans.			Buddhists.			Other classes.			Total.		
Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
...	...	...	...	...	...	307	277	584	407	386	793
...	...	...	...	...	...	307	277	584	407	386	793
6	2	8	...	...	...	...	...	...	134	108	242
3	3	6	...	..	...	...	...	...	50	54	104
9	5	14	...	...	...	...	...	...	184	162	316
10	11	21	..	...	...	9	5	14	4,876	4,267	9,143
19	16	35	...	...	...	9	5	14	5,060	4,429	9,489
...	...	...	...	...	...	3	4	7	247	218	465
2	1	3	...	...	...	...	...	...	62	48	110
2	1	3	...	...	...	3	4	7	309	266	575
53	38	91	...	...	...	...	...	...	625	527	1,152
218	157	375	...	...	...	326	290	616	24,202	21,072	45,274
271	195	466	...	...	...	326	290	616	24,827	21,599	46,423

ANNUAL FORM NO. V.—*Deaths registered according to clas*

1	2	3											
		Number of deaths											
No.	District.	Christians.			Hindus.			Muhammadans.			Buddhists.		
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.
1	Cuttack	14	15	29	26,574	27,245	53,819	829	827	1,656	...	...	...
2	Balasore	6	14	20	12,087	13,032	25,119	398	385	783	...	...	...
3	Puri	8	5	13	13,513	13,508	27,021	230	245	475	...	...	...
4	Sambalpur	13	23	36	13,261	11,653	24,914	25	38	63	...	...	...
5	Angul	...	...	...	1,921	1,855	3,776	...	...	...	...	...	...
6	Khondmals	...	...	...	379	358	737	...	...	...	...	...	...
7	Ganjam Plains ...	43	46	89	15,702	15,564	31,266	58	55	113	...	...	...
	AGENCY DISTRICTS.												
8	Ganjam	16	17	33	1,036	925	1,961	...	...	...	...	...	...
9	Koraput	8	4	12	311	261	572	10	9	19	...	...	...
	Total of Agency districts ...	24	21	45	1,347	1,186	2,533	10	9	19	...	...	...
	Total for the province ...	108	124	232	84,784	84,401	169,185	1,550	1,559	3,109	...	...	...

DIX I—*contd.*

in the district of Orissa Province during the year 1940.

			4															
registered.			Ratio of deaths per 1,000 of population.															
Other classes			Christians.			Hindus.			Muhammadans.			Buddhists.			Other classes.			No.
Male.	Female.	Total	Male.	Female.	Total.	Male.	Female.	Tota l.	Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.	
4	2	6	11·46	9·09	10·09	26·67	24·54	25·55	27·67	22·88	25·05	...	...	...	12·74	10·31	11·81	
223	171	394	9·92	20·29	14·55	26·39	26·77	26·59	25·41	23·95	24·68	...	...	...	35·81	24·47	30·76	
...	...	...	10·42	6·51	8·46	27·66	25·85	26·72	21·15	21·04	21·09	...	...	...	...	...	...	
3	4	7	6·81	11·65	9·26	25·90	21·85	23·83	9·88	16·30	12·96	...	...	...	0·53	0·68	0·61	
...	...	...	...	...	...	28·11	25·97	27·02	...	...	...	...	...	...	...	...	...	
939	890	1,829	...	...	...	31·55	30·11	30·84	...	...	...	...	...	...	33·35	29·56	31·39	
32	18	50	49·54	52·45	51·00	27·41	22·21	24·55	28·18	29·13	28·61	...	...	...	6·10	4·70	5·51	
14	26	40	8·97	10·28	9·60	15·92	13·92	14·95	...	...	...	...	...	...	0·22	0·39	0·30	
1	...	1	15·75	7·60	11·61	24·16	20·17	22·16	75·76	64·29	69·85	...	...	...	3·16	...	1·57	
15	26	41	10·47	9·64	10·06	17·30	14·94	16·11	53·48	50·85	52·20	...	...	...	0·23	0·39	0·31	
1,216	1,111	2,327	13·67	14·96	14·83	26·61	24·00	25·24	25·22	22·80	23·95	...	...	...	10·96	9·73	10·34	

APPENDIX I—*contd.*

Annual Form No. V-A.—*Death rates according to class, urban and rural areas separately in each district of Orissa Province during the year 1940.*

Number.	District.		Christians.	Hindus.	Muhammadans.	Buddhists.	Other classes.	Total.
1	2		3	4	5	6	7	8
1	Cuttack ...	Urban ...	11·57	21·16	21·05	...	111·11	20·94
		Rural ...	2·21	25·70	26·05	...	...	25·70
2	Balasore ...	Urban ...	10·27	18·89	16·04	...	37·88	18·21
		Rural ...	16·89	26·70	25·78	...	30·69	26·72
3	Puri ...	Urban ...	...	37·38	2·11	...	...	36·73
		Rural ...	9·73	26·32	21·50	...	...	26·19
4	Sambalpur ...	Urban ...	...	19·96	9·58	...	21·28	18·84
		Rural ...	9·88	23·89	14·00	...	0·52	23·55
5	Angul ...	Urban ...	...	...	...	...	...	...
		Rural ...	...	27·02	...	...	...	26·88
6	Khondmals ...	Urban ...	...	...	...	...	...	...
		Rural ...	...	30·84	...	...	31·39	31·19
7	Ganjam Plains ...	Urban ...	15·36	25·64	27·25	...	...	25·53
		Rural ...	75·80	24·50	29·51	...	5·55	24·41
	Agency Districts.							
8	Ganjam ...	Urban ...	...	...	...	...	...	...
		Rural ...	9·60	14·95	...	...	0·80	7·63
9	Koraput ...	Urban ...	...	...	...	...	...	...
		Rural ...	11·61	22·16	69·85	...	1·57	21·76
	Total of Agency districts.	Urban ...	...	...	...	...	...	...
		Rural ...	10·06	16·11	52·20	...	0·31	8·96
	Total for the province.	Urban ...	10·82	25·31	19·52	...	39·22	24·53
		Rural ...	15·51	25·24	24·75	...	10·30	24·72

APPENDIX I.

Annual Form No. VI.

ANNUAL FORM No. VI.—*Deaths registered from different causes in the*

1	2	3			4			5			6	7	8	9	10	11
No.	District and towns.	Population for which returns were received.			Births.			Birth rate.			Cholera.	Smallpox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.
		Male.	Female.	Total.	Male.	Female.	Total.	Male.	Female.	Total.						
	DISTRICTS EXCLUDING TOWNS.															
1	Cuttack ...	980,266	1,107,885	2,088,151	41,188	38,548	79,736	19·72	18·46	38·18	1,442	3,428	...	23,473	6,303	1,180
2	Balasore ...	470,385	502,372	972,757	18,527	17,478	36,005	19·04	17·97	37·01	957	412	...	15,766	503	83
3	Puri ...	479,511	518,075	997,586	18,498	17,237	35,735	18·54	17·28	35·82	676	647	...	11,032	2,685	948
4	Sambalpur ...	514,424	536,169	1,050,593	19,244	18,094	37,338	18·32	17·22	35·54	100	236	...	13,957	1,139	1,178
5	Angul ...	68,694	71,764	140,458	3,205	3,070	6,275	22·82	21·86	44·68	4	5	...	3,130	32	23
6	Khondmals ...	40,231	42,047	82,278	1,656	1,603	3,259	20·13	19·48	39·61	12	1	...	2,287	14	1
7	Ganjam plains ...	552,976	677,676	1,230,652	23,229	21,876	45,105	18·87	17·78	36·65	515	566	...	17 225	1,648	585
	AGENCY DISTRICTS.															
8	Ganjam ...	131,493	135,168	266,661	1,206	1,210	2,416	4·52	4·54	9·06	42	70	...	1,550	48	80
9	Koraput ...	13,830	13,925	27,755	366	333	699	13·18	12·00	25·18	44	82	...	220	53	43
	Total of Agency districts.	145,323	149,093	294,416	1,572	1,543	3,115	5·34	5·24	10·58	96	152	...	1,770	101	123
	Total for the Province.	3,251,810	3,605,081	6,856,891	127,119	119,449	246,568	18·54	17·42	35·96	3,792	5,457	...	88,640	12,422	4,134
	TOWNS.															
	CUTTACK DISTRICT.															
1	Cuttack ...	36,357	28,906	65,263	1,177	1,052	2,229	18·03	16·12	34·15	1	176	...	238	102	99
2	Kendrapara ...	6,237	6,383	12,620	181	201	382	14·34	15·93	30·27	...	11	...	168	21	22
3	Jajpur ...	5,274	5,399	10,673	114	112	226	10·68	10·49	21·17	...	9	...	76	13	6
	BALASORE DISTRICT.															
4	Balasore ...	10,133	7,710	17,843	157	148	305	8·80	8·29	17·09	17	5	...	143	16	6
	PURI DISTRICT.															
5	Puri ...	20,703	16,865	37,568	579	542	1,121	15·41	14·43	29·84	24	4	...	508	173	62
	SAMBALPUR DISTRICT.															
6	Sambalpur ...	7,716	7,301	15,017	184	161	345	12·25	10·72	22·97	2	32	...	114	4[illegible]	23
	GANJAM DISTRICT															
7	Berhampur ...	18,490	19,260	37,750	884	796	1,680	23·42	21·08	44·50	2	58	...	240	122	156
8	Parlakimedi ...	9,604	10,468	20,072	377	335	712	18·78	16·69	35·47	55	2	...	88	88	52
	Total for all towns.	114,514	102,292	216,806	3,653	3,347	7,000	16·85	15·44	32·29	101	297	...	1,573	567	456
	Total for the whole Province.	3,366,324	3,707,373	7,073,697	130,772	122,790	253,568	18·49	17·36	35·85	3,893	5,754	...	90,213	12,989	4,590

DIXI —*contd.*

district and towns of Orissa Province during the year 1940.

12						13	14			15												
Injuries.							Total deaths from all causes.			Ratio of deaths per 1,000 of population.												
Suicide.																		From all causes.				
Male.	Female.	Wounds or accidents.	Snake bite or killed by wild animals.	Rabies.	Total.	All other causes.	Male.	Female.	Total.	Cholera.	Smallpox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	Male.	Female.	Total.	Mean of previous five years.	No.
120	287	448	194	25	1,074	16,746	26,438	27,218	53,6[illegible]6	0'[illegible]9	1'65	...	11'24	3'0[illegible]	0 57	0 [illegible]1	8'0[illegible]	[illegible]6'97	46'57	25'70	35'58	1
65	99	211	[illegible]20	16	511	7,762	12,541	13,450	25,991	0 98	0'42	...	16'21	0'51	0'09	0'[illegible]3	[illegible]'98	26'66	26'77	26 72	[illegible]1 31	2
40	67	253	78	18	456	9,685	12,999	1[illegible],1[illegible]0	[illegible]6,129	0'68	0 65	...	11 06	2'[illegible]9	0'[illegible]5	0'45	9'71	27'11	25'34	[illegible]6'19	28'53	3
47	23	165	91	22	348	7,779	13,145	11,[illegible]92	24,737	0 10	0'22	...	13'29	1'[illegible]8	1'12	0'33	7'41	2[illegible]'[illegible]5	21'62	23'[illegible]5	...	4
9	19	46	25	2	97	4[illegible]5	1,921	1,855	3,776	0'03	0'01	...	22'[illegible]8	[illegible]'[illegible]3	0'1[illegible]	0'69	3'45	27'96	25'85	26'88	...	5
2	6	15	12	...	35	216	1,318	1,248	2,566	0'15	0'01	...	2[illegible]'80	0.17	[illegible]'01	0'43	2'62	32' 6	29'68	1'19	...	6
17	19	88	108	16	248	3,242	15,055	14,987	90,042	0'42	0'46	...	14'00	1'34	0'48	0'20	7'41	27'23	22'1[illegible]	34'41	...	7
3	2	7	17	...	29	215	1,066	968	2,034	0'46	0'26	...	5'81	0'18	0'3[illegible]	0'11	0'81	8'10	7 '16	7'63	...	8
3	...	10	1	2	16	146	330	274	604	1'58	2'95	...	7'[illegible]3	1'91	1'55	0'58	5'26	23'86	1[illegible]'6[illegible]	21'76	...	9
6	2	17	18	2	45	361	1,396	1,242	2.632	0'29	0.52	...	6'01	0'34	0'42	0'15	1.23	9'61	8'33	8'96	...	...
306	515	1,243	646	101	2,814	52,276	84,813	84,722	169,535	0'55	0 60	...	12'93	1'81	0'60	0'41	7'62	26'08	23'50	24'72	...	...
6	...	9	...	1	16	752	771	613	1,384	0'02	2'70	...	3'65	1'[illegible]6	1'52	0'24	11'52	21'21	21'21	21'21	10'33	1
1	...	...	...	...	1	106	147	182	329	...	0'87	...	13'31	1'67	1'74	0'03	8'40	23'57	28'51	26'07	32'09	2
...	1	...	1	...	2	35	65	[illegible]6	141	...	0'84	...	7'12	1'22	0'5[illegible]	0'19	3'28	12'[illegible]2	14'06	13'21	15 18	3
...	2	13	...	...	15	123	173	152	325	0'95	0'28	...	8'0[illegible]	[illegible]'90	0'34	0'84	6'89	17'07	19'71	18'21	21'80	4
3	2	10	1	...	16	5[illegible]3	752	628	1,380	0'64	0'11	...	13'52	4'60	1'65	0'43	15'7[illegible]	36'32	37'24	6'73	33'33	5
1	...	2	...	...	3	68	157	126	283	0'13	2'1[illegible]	...	7'59	2'73	1'53	0'20	4'53	2[illegible]'35	17 26	18'84	...	6
3	2	9	...	...	16	361	540	445	985	0.05	1'54	...	6'36	[illegible]'23	4'9[illegible]	0'42	9'[illegible]6	29'20	23'1[illegible]	26 09	...	7
1	2	1	...	1	5	203	240	251	491	2'74	0'10	...	4'29	4'38	2'59	0'25	10'11	24'99	23'98	24'46	..	8
16	9	44	4	2	74	2,241	2,845	2,473	5 318	0,47	1'37	...	7.25	2'66	2'10	0'34	10'34	24'84	24'18	24'53	...	...
321	527	1,287	650	103	2,888	54,517	87, 58	87.195	174,853	0'55	0'81	...	12'75	1 84	0'65	0'41	7'71	26'01	23'52	24'72	...	...

ANNUAL FORM NO. VI (*a*).—*Deaths registered from different kinds*

Municipalities.	Malaria.	Enteric fever.	Measles.	Relapsing fever (spirochoctal).	Kala-azar.	Influenza.	Cerebro-spinal fever.	Typhus fever.	Black-water fever.	Other fevers.	Dysentery.	Diarrhoea.
1	2	3	4	5	6	7	8	9	10	11	12	13
CUTTACK DISTRICT.												
Cuttack	17	26	...	...	...	12	...	...	...	183	91	11
Kendrapara... ...	162	2	...	...	1	...	2	...	...	1	18	3
Jajpur	71	...	...	...	...	2	...	...	...	3	11	2
BALASORE DISTRICT.												
Balasore	143	...	...	...	...	...	...	...	...	...	16	...
PURI DISTRICT.												
Puri	...	...	...	...	...	...	...	...	...	508	173	...
SAMBALPUR DISTRICT.												
Sambalpur	45	2	...	...	...	...	...	...	...	67	87	4
GANJAM DISTRICT.												
Berhampur	44	34	2	...	...	9	1	...	...	152	59	63
Parlakimedi... ...	15	10	...	...	...	...	...	...	...	61	50	88

DIX I—*contd.*

of fevers, dysentery, diarrhoea, respiratory diseases and other causes.

Pneumonia.	Pulmonary tuberculosis.	Whooping cough.	Other respiratory diseases.	Beri-beri.	Acute poliomyelitis.	Diphtheria.	Chicken-pox.	Mumps.	Tuberculosis of joints.	Other tubercular diseases.	Leprosy.	Cancer.	Deaths from child-birth.	Deaths under one year.	Infantile mortality rate per 1,000 births.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
31	1	...	67	...	...	...	...	...	...	6	9	4	5	339	152·09
17	2	...	3	...	...	...	...	...	...	...	...	...	31	99	259·16
4	1	...	1	...	...	...	...	...	...	...	...	...	2	28	123·89
2	...	...	4	...	...	...	...	...	...	...	...	...	2	64	209·8
...	...	...	62	...	...	...	...	...	...	17	87	...	11	225	200·71
3	...	...	20	...	...	...	...	...	...	...	...	...	10	51	147·83
62	...	...	96	1	...	...	7	...	...	...	10	3	11	242	144·05
21	11	1	20	...	...	...	...	...	...	28	2	1	7	104	146·07

ANNUAL FORM No. VII—*Deaths registered from cholera in the*

1	2	3		4		5						
No.	District.	Circles of registration.		Villages.								
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.	January.	February.	March.	April.	May.	June.	July.
1	Cuttack	18	13	5,506	390	707	851	150	41	6	8	16
2	Balasore	10	9	3,479	348	482	155	77	20	1	7	20
3	Puri	6	6	2,987	241	78	173	112	41	44	24	31
4	Sambalpur.	27	9	3,094	12	...	9	11	...	1	1	1
5	Angul	5	1	467	1	...	...	...	4	...	...	...
6	Khondmals.	4	2	1,141	5	1	...	5	6	...	...	...
7	Ganjam plains	9	9	2,642	199	1	10	32	8	14	8	16
	AGENCY DISTRICTS.											
8	Ganjam ...	4	2	144	16	...	2	...	...	...	...	...
9	Koraput ...	6	2	6	2	...	...	...	...	...	...	...
	Total of Agency districts...	10	4	150	18	...	2	...	...	...	...	...
	Total for the Province ...	84	53	19,466	1,214	1,219	700	887	120	66	43	84

districts of Orissa Province during each month of the year 1940.

					6			7			8	1
					Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
2	3	13	90	56	681	762	1,443	0·66	0·66	0·66	1·87	
17	57	121	48	19	478	496	974	0·99	0·97	0·98	1·24	
7	1	4	111	74	321	379	700	0·64	0·71	0·68	0·83	
52	20	...	6	1	42	60	102	0·08	0·11	0·10	...	
...	...	...	...	...	4	...	4	0·06	...	0·03	...	
...	...	...	...	...	10	2	12	0·25	0·05	0·15	...	
39	104	113	165	67	282	290	572	0·49	0·41	0·44	...	
7	1	28	1	3	21	21	42	0·16	0·16	0·16	...	
...	10	7	27	...	29	15	44	2·10	1·08	1·58	...	
7	11	35	28	3	50	36	86	0·35	0·24	0·29	...	
124	196	286	448	220	1,868	2,025	3,893	0·56	0·55	0·55	...	

ANNUAL FORM NO. VIII.—*Deaths registered from smallpox in the district*

1	2	3		4		5					
		Circles of registration.		Villages.							
No.	Districts.	Number in each district.	Number from which deaths from smallpox were reported.	Number in each district.	Number from which deaths from smallpox were reported.	January.	February.	March.	April.	May.	June.
1	Cuttack ..	18	13	5,506	1,005	403	673	750	509	483	216
2	Balasore ..	10	8	3,479	245	17	37	52	67	47	89
3	Puri	6	6	2,957	245	15	47	58	62	85	106
4	Sambalpur ..	27	13	3,094	130	25	29	86	87	53	88
5	Angul	5	1	467	1	3	..	..	..	..	..
6	Khondmals ..	4	1	1,141	1	..	..	..	..	..	..
7	Ganjam Plains ..	9	9	2,642	207	44	55	66	51	41	25
	AGENCY DISTRICTS.										
8	Ganjam ..	4	3	144	46	4	2	2	..	2	9
9	Koraput ..	6	2	6	2	..	..	..	2	4	13
	Total of Agency districts.	10	5	150	48	4	2	2	2	6	22
	Total for the Province	84	56	19,466	1,882	511	843	964	728	715	446

DIX I—*contd.*

of Orissa Province during each month of the year 1940.

						6			7		8			9	1
						Total.			Number of deaths among children.		Ratio of deaths per 1,000 of population.				
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Under one year.	One year and under 10 years.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
144	112	80	77	64	123	1,784	1,850	3,634	390	1,015	1·74	1·61	1·67	0·99	1
48	51	33	8	10	18	201	216	417	43	48	0·42	0·43	0·42	0·42	2
100	65	22	19	32	40	304	347	651	55	170	0·61	0·65	0·63	0·35	3
28	9	1	11	3	3	120	148	268	..	..	0·23	0·27	0·25	..	4
..	..	..	1	1	..	5	..	5	4	..	0·07	..	0·04	..	5
..	..	..	..	1	..	1	..	1	..	..	0·02	..	0·01	..	6
45	18	25	28	69	159	285	341	626	64	111	0·49	0·48	0·49	..	7
21	13	4	6	..	7	32	38	70	1	..	0·24	0·28	0·26	..	8
3	..	4	9	15	32	39	43	82	..	..	2·82	3·09	2·95	..	9
24	13	8	15	15	39	71	81	152	1	..	0·49	0·54	0·52	..	
379	268	169	154	195	382	2,771	2,983	5,754	557	1,344	0·82	0·80	0·81	..	

ANNUAL FORM NO. IX.—*Deaths registered from fevers in the districts*

1	2	3		4		5						
		Circles of registration.		Villages.								
No.	Districts.	Number in each district.	Number from which deaths from fever were reported.	Number in each district.	Number from which deaths from fever were reported.	January.	February.	March.	April.	May.	June.	July.
1	Cuttack	13	13	5,506	5,085	2,740	2,098	1,904	1,941	1,828	1,224	1,492
2	Balasore	10	10	3,479	3,388	1,855	1,392	1,143	1,179	1,064	801	925
3	Puri	6	6	2,987	2,936	1,392	1,083	847	896	827	650	759
4	Sambalpur	27	27	3,094	2,956	1,491	1,044	1,147	1,285	1,110	785	911
5	Angul	5	5	467	388	358	221	283	368	291	198	215
6	Khondmals	4	4	1,141	1,114	168	171	187	181	286	175	187
7	Ganjam Plains	9	9	2,642	2,501	1,558	1,057	1,051	1,224	1,146	1,192	1,487
	AGENCY DISTRICTS.											
8	Ganjam	4	4	144	138	162	125	131	160	155	101	104
9	Koraput	6	6	6	6	17	18	12	25	29	13	20
	Total of Agency districts ...	10	10	150	144	179	138	143	185	184	114	124
	Total for the Province ...	84	84	19,466	18,512	9,736	7,149	6,705	7,254	6,686	5,139	6,100

DIX I—*contd.*

of Orissa Province during each month of the year 1940.

					6			7			8	1
					Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
1,594	1,738	1,982	2,439	3,030	11,405	12,550	23,955	11·09	10·98	11·01	14·09	1
1,109	1,222	1,464	1,666	2,089	7,624	8,285	15,909	15·87	16·24	16·06	19·27	2
707	819	982	1,188	1,490	5,551	5,989	11,540	11·10	11·20	11·15	11·86	3
1,070	1,454	1,194	1,227	1,353	7,278	6,798	14,071	13·94	12·50	13·20	...	4
260	258	239	212	242	1,599	1,531	3,130	23·27	21·33	22·28	...	5
200	206	194	184	198	1,166	1,121	2,287	28·98	26·66	27·80	...	6
1,594	1,512	1,560	1,844	2,326	8,733	8,818	17,551	15·03	12·47	13·62	...	7
144	138	108	120	107	826	724	1,550	6·28	5·35	5·81	...	8
20	15	15	18	23	122	98	220	8·82	7·04	7·93	...	9
164	148	123	138	130	948	822	1,770	6·53	5·51	6·01	...	
6,698	7,852	7,638	8,898	10,858	44,304	45,909	90,213	13·16	12·38	12·75	...	

ANNUAL FORM No. X.—*Deaths registered from dysentery and diarrhoea in the districts*

1	2	3		4		5						
No.	Districts.	Circles of registration.		Villages.								
		Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	January.	February.	March.	April.	May.	June.	July.
1	Cuttack ...	18	18	5,506	2,328	762	590	507	508	519	858	524
2	Balasore ...	10	9	3,479	339	67	59	49	82	30	22	45
3	Puri ...	6	6	2,987	1,420	297	267	204	226	205	194	266
4	Sambalpur ...	27	18	3,094	639	144	98	92	74	98	62	107
5	Angul ...	5	5	467	89	2	3	7	2	4	5	...
6	Khondmals ...	4	3	1,141	7	2	...	1	3	...	...	...
7	Ganjam Plains ...	9	9	2,642	1,228	129	97	90	104	99	102	170
	AGENCY DISTRICTS.											
8	Ganjam ...	4	4	144	39	7	2	1	5	7	4	1
9	Koraput ...	6	5	6	5	1	1	...	1	8	11	5
	Total of Agency districts	10	9	150	44	8	3	1	6	10	15	6
	Total for the Province	84	72	19,466	6,034	1,411	1,117	951	955	960	758	1,118

DIX I—*contd.*

of Orissa Province during each month of the year 1940.

					6			7			8	1
					Total.			Ratio of deaths per 1,000 of population.				
August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.	Mean ratio per 1,000 of previous five years.	No.
528	548	465	521	614	3,295	3,144	6,439	3·20	2·74	2·96	4·22	1
23	53	43	42	51	272	244	516	0·57	0·48	0·52	0·60	2
238	246	208	289	268	1,442	1,416	2,858	2·88	2·65	2·76	3·75	3
95	114	127	83	91	662	518	1,180	1·27	0·96	1·11	...	4
1	2	1	4	1	17	15	32	0·25	0·21	0·23	...	5
...	1	6	1	...	3	11	14	0·08	0·26	0·17	...	6
256	202	185	186	238	1,048	810	1,858	1·80	1·15	1·44	...	7
10	3	2	1	5	25	23	48	0·19	0·17	0·18	...	8
8	6	9	5	3	35	18	53	2·53	1·29	1·91	...	9
18	9	11	6	8	60	41	101	0·41	0·27	0·34	...	
1,159	1,170	1,046	1,082	1,271	6,799	6,199	12,998	2·02	1·67	1·84	...	

ANNUAL FORM NO. XI.—*Deaths registered from respiratory diseases in the*

1	2	3		4		5						
No.	Districts.	Circles of registration.		Villages.								
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.	January.	February.	March.	April.	May.	June.	July.
1	Cuttack ...	13	13	5,506	880	157	129	125	93	106	68	92
2	Balasore	10	6	3,479	37	7	7	4	8	9	6	8
3	Puri	6	6	2,987	664	138	96	82	92	77	73	78
4	Sambalpur	27	23	3,094	670	114	86	132	115	100	97	101
5	Angul	5	4	467	20	2	3	4	4	2	3	1
6	Khondmals	4	2	1,141	4	...	...	...	...	...	...	1
7	Ganjam Plains	9	9	2,642	678	93	75	64	59	54	58	64
	AGENCY DISTRICTS.											
8	Ganjam	4	4	144	51	8	10	8	13	3	5	3
9	Koraput	6	4	6	4	5	3	3	3	1	1	5
	Total of Agency districts ...	10	8	150	55	13	13	11	16	4	6	8
	Total of the Province ...	84	71	19,466	3,008	524	409	422	387	352	311	348

DIX I—*contd.*

districts of Orissa Province during each month of the year 1940.

					6			7			8	1
					Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
104	114	96	105	118	758	549	1,307	0·74	0·48	0·60	0·61	1
11	11	4	7	7	49	40	89	0·10	0·08	0·09	0·10	2
73	81	68	88	69	537	473	1,010	1·07	0·88	1·97	1·09	3
105	83	77	85	106	810	391	1,201	1·55	0·72	1·13	...	4
1	...	1	1	1	15	8	23	0·22	0·11	0·16	...	5
...	...	...	...	...	...	1	1	...	0·02	0·01	...	6
85	49	72	67	96	431	405	836	0·74	0·57	0·65	...	7
10	5	7	5	3	47	33	80	0·36	0·24	0·30	...	8
3	1	10	4	4	26	17	43	1·88	1·22	1·55	...	9
13	6	17	9	7	73	50	123	0·50	0·34	0·42	...	
392	344	335	362	404	26,73	1,917	4,590	0·79	0·52	0·65	...	

ANNUAL FORM No. XII.—*Deaths registered from plague in the*

1	2	3		4		5					
		Circles of registration.		Villages.							
No.	Districts.	Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.	January.	February.	March.	April.	May.	June.
				Nil.							

DIX I—*concld.*

districts of Orissa Province during each month of the year 1940.

						6			7			8	1
						Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
July.	August.	September.	October.	November.	December.	Male.	Female.	Total.	Male.	Female.	Total.		
							Nil.						

APPENDIX II.

Provincial.

Statement showing details of registration in areas in which it is compulsory.

Compulsory registration area.	Population according to census of 1931.	Probable number of births at the rate of 286 per 1,000 married women between the ages of 15 and 40.	Actual number of births registered during the year.	Probable birth-rate per mille (columns 2 and 3).	Registered birth-rate per mille during the year.	Number of deaths registered during the year. Including deaths in dispensary.	Number of deaths registered during the year. Excluding deaths in dispensary.	Death rate per mille. Including deaths in dispensary.	Death rate per mille. Excluding deaths in dispensary.	Number of persons prosecuted under Act IV (B. C.) of 1883.	Number of persons convicted.
1	2	3	4	5	6	7	8	9	10	11	12
Cuttack	65,263	Not available.	2,229	Not available.	34·15	1,753	1,384	26·86	21·21	...	...
Kendrapara	12,620		382		30·27	361	329	23·61	26·07	...	...
Jajpur	10,673		226		21·17	155	141	14·52	13·21	...	...
Balasore	17,843		305		17·09	410	325	22·98	18·21	...	...
Puri	37,568		1,121		29·84	1,672	1,380	44·51	36·73	40	21
Sambalpur	15,017		345		22·97	344	283	22·91	18·84	...	...
Berhampur	37,750		1,680		44·50	1,132	935	29·99	26·09	...	...
Parlakimedi	20,072		712		35·47	539	491	26·85	24·46	...	...
Total ...	216,806	...	7,000	...	32·29	6,366	5,318	29·36	24·53	40	21

APPENDIX III.

Table showing health services in rural and urban

District.	Rural areas. Medical Officers of Health: Holding D. P. H. Whole time.	Holding D. P. H. Part time.	Licentiates L. P. Hs. Whole time.	Licentiates L. P. Hs. Part time.	Epidemic staff.	Sanitary and Health Inspectors.	Vaccinators. Male.	Vaccinators. Female.	School Medical Officers.	Other Health staff.
1	2	3	4	5	6	7	8	9	10	11
Cuttack	1	...	3	...	4	9	84	...	...	...
Angul	...	...	...	...	...	1	...	...	...	...
Balasore	1	...	1	...	2	6	44	...	...	...
Puri	1	...	...	...	9	4	...	...	...	2
Sambalpur	...	...	...	...	...	...	29	...	...	...
Ganjam plains ...	1	...	...	...	2	8	19	6	...	...
Ganjam Agency ...	...	...	...	...	...	3	...	...	...	...
Khondmals	...	...	...	...	...	1	...	...	...	...
Koraput	...	...	1	...	...	8	25	1	...	...
Orissa Province ...	...	...	...	...	...	...	...	...	...	...

DIX III.

areas of Orissa Province during the year 1940.

Urban areas.

Municipalities.		Medical Officers of Health				Sanitary and Health Inspectors.	Vaccinators.		Inspector of Vaccination	School Medical Officers.	Other Health staff.
		Holding D. P. H.		Licentiates L. P. Hs.			Male.	Female.			
		Whole time.	Part time.	Whole time.	Part time.						
12		13	14	15	16	17	18	19	20	21	22
Cuttack ...	...	1	...	1	...	6	2	1	1	...	2
Kendrapara	...	...	...	...	...	1	1	...	...	...	2
Jajpur ...	...	...	...	...	...	1	...	...	...	...	...
Balasore ...	...	...	...	...	...	1	1	...	...	...	...
Puri ...	...	1	...	...	...	2	2	1	...	...	7
Sambalpur ...	...	...	...	...	...	2	1	...	1	...	...
Berhampur	...	...	...	1	...	2	1	..	...	...	...
Parlakimedi	...	...	...	...	...	1	1	...	...	...	...
...		...	...	...	...	...	...	...	...	...	...
...		...	...	...	...	...	...	...	...	2	...

APPENDIX IV.

Table showing maternity and child-welfare centres, health visitors and trained midwives in rural and urban areas in Orissa during 1940.

District.	Maternity and child welfare.												Remarks.
	Centres maintained by—						Trained visitors.		Trained midwives.		Trained *dais.*		
	Government.		Local and municipal bodies.		Other agencies.								
	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	Rural.	Urban.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Cuttack ..	...	...	...	...	...	1	...	1	...	...	10	12	
Balasore ...	...	...	1	1	...	...	...	1	2	4	...	...	
Puri	...	...	1	1	...	...	...	...	...	1	1	...	
Sambalpur ...	...	...	...	1	...	...	...	...	...	1	...	1	
Ganjam ...	...	...	...	1	...	1	...	...	2	2	...	...	
Koraput ...	...	...	...	...	4	...	...	...	9	...	5	...	
Total ...	...	...	2	4	4	2	...	2	13	8	16	13	

STATEMENT No. I.

STATEMENT No. I.—*Showing particulars of vaccination in the*

Number.	District.		Population of district according to the census of 1931.	Average number of vaccinators employed throughout the season.	Total number of persons vaccinated.			Average number of persons vaccinated by each vaccinator.	Primary
					Male.	Female.	Total.		Total.
1	2		3	4	5	6	7	8	9
1	Cuttack ...	District excluding towns ...	2,176,707	45	112,040	56,572	168,612	3,747	59 098
		Towns		6	19,603	9,915	29,518	4,920	9,337
2	Balasore ...	District excluding towns ...	990,600	30	32,620	20,983	53,553	1,785	3[illegible],609
		Towns		1	2,112	981	3,093	3,093	291
3	Puri	District excluding towns ...	1,035,154	38	63,062	34,230	97,292	2,560	29,624
		Towns		3	5,908	2,889	8,797	2,932	2,440
4	Sambalpur ...	District excluding towns ...	1,065,610	68	40,314	20,083	60,397	888	19,292
		Towns		1	1,257	730	1,987	1,987	437
5	Angul		140,458	7	8,899	6,002	14,901	2,129	5,409
6	Khondmals		82,278	3	5,646	3,533	9,179	3,060	2,290
7	Ganjam ...	District excluding towns ...	1,555,135	41	104,823	94,713	199,536	4,867	52,407
		Towns		3	13,383	10,823	24,206	8,068	2,200
8	Koraput		963,617	26	38,094	29,531	67,625	2,601	28,319
	Total of Vaccine Department.	District excluding towns ...	8,009,559	258	405,498	265,597	671,095	2,601	227,048
		Towns		14	42,263	25,338	67,601	4,829	7,705
		Total		272	447,761	290,935	738,696	2,716	234,753
	Jails ...		...	...	5,717	278	5,995	...	49
	Total of Railway Dispensary ...		...	...	...	...	...	...	...
	Cooly Depot ...		...	...	1,459	1,0[illegible]7	2,486	...	...
	Grand Total ...		...	...	454,957	292,240	747,177	...	234,802

districts of Orissa during the year 1940.

vaccination.				Re-vaccination.			Percentage of successful cases in which the results were known.		Persons successfuly vaccinated per 1,000 of population.	Total cost of Vaccination Department.	Number of all successful vaccinations and re-vaccinations performed by the vaccination staff only.	Average cost of each successful case performed by the vaccination staff.
Successful.												
Under one year.	One year and under six years.	Total of all ages.	Unknown.	Total.	Successful.	Unknown.	Primary.	Re-vaccination.				
10	11	12	13	14	15	16	17	18	19	20	21	22
										Rs. a. p.		Rs. a. p.
21,211	28,154	55,777	2,722	109,514	6,757	97,979	98·94	58·58	33·28	2,301 6 9	72,440	0 0 6
292	1,582	2,027	219	27,181	7,663	10,519	95·70	45·99				
4,883	19,105	29,636	777	22,944	11,065	9,919	99·24	84·77	42·06	629 9 0	41,661	0 0 5
136	145	291	...	2,802	668	132	100·00	25·00				
1,461	15,707	22,141	6,774	67,668	23,270	13,752	96·81	68·61	47·11	544 9 0	48,768	0 0 2
100	1,978	2,391	20	6,357	589	485	98·80	10·03				
15,142	3,506	18,766	489	41,105	11,606	27,219	99·80	83·58	29·85	5,229 6 0	31,813	0 2 10½
188	227	419	18	1,550	781	514	100·00	75·39				
3,093	2,145	5,280	121	9,492	3,598	2,882	99·84	60·48	66·06	789 13 0	9,278	0 1 4
1,222	919	2,153	108	6,889	3,960	907	98·67	66·20	74·30	1,546 12 0	6,113	0 4 ½
15,870	25,781	45,078	5,107	147,129	58 624	23,820	95·30	47·54	77·12	24,670 7 5	120,189	0 3 2½
724	1,3[illegible]1	2 063	52	22,006	14,150	1,332	96 91	68·44				
4,491	17,128	24,382	3,[illegible]96	39,306	13,770	11,114	97·43	49 11	40·05	17,666 2 4	38,597	0 7 6
67,376	112,445	203,183	19,394	444,047	133,050	207,892	97·84	56·34	45·96	53,878 1 6	368,859	0 2 4
1,440	5,283	7,221	309	59,896	23,851	12,982	97·49	50·84				
68,816	117,728	210,394	19,703	503,943	156,901	220,874	97·83	55·07				
2	4	32	14	5,946	1,532	1,046	91·43	31·50	...	...	...	...
...	...	—	...	...	...	...	...	...	...	...	...	...
...	...	...	...	2,486	...	2,486	...	...	...	...	...	...
68,818	117,732	210,426	19,717	512,375	158,433	224,406	97·83	55·09	45·96	53,878 1 6	368,859	0 2 4

SUMMARY.

	Total number of persons vaccinated.		Total number of operations performed.		Percentage of successful cases in which the results were known.		Average number of persons vaccinated by each vaccinator.		Number of children successfully vaccinated.		Ratio of successful vaccinations per 1,000 of population.	Total cost of Vaccination Department.	Average cost of each successful case.
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Vaccinators employed.	Persons vaccinated by each vaccinator.	Under one year.	One year and under six years.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14
												Rs. a. p.	Rs. a. p.
BY SPECIAL STAFF.													
Statement (I)	234,753	503,943	234,753	503.943	97'83	55'07	272	2,716	68,816	117,728			
BY OTHER AGENCIES.											45'96	53,878 1 6	0 3 4
Jails, railway dispensaries and cooly depot.	49	8,432	49	8,432	91'43	31'50	...	...	2	4			
Total ...	234,802	512,375	234,802	512,375	97'83	55'02	272	2,716	68,818	117,732	45'96	53,878 1 6	0 3 4

Comparative Statement No. II.—Showing the percentage of persons primarily vaccinated to the total number of vaccinations performed in the Province of Orissa in each of the undermentioned official years.

Establishments.	Years.									
	1931-32.	1932-33.	1933-34.	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.	1939-40.	1940.
1	2	3	4	5	6	7	8	9	10	11
Government staff	83·30	88·53	66·08	44·57	47·84	48·89	37·61	47·92	44·17	30·84
Municipal	66·46	38·24	19·81	19·01	22·10	25·42	28·84	14·25	10·37	11·39
District Board	77·91	71·35	34·06	37·22	31·01	23·78	24·38	28·27	25·36	24·68
Licensed vaccinators ...	93·27	79·78	76·30	66·82	65·78	62·24	65·70	64·62	54·97	54·84
Railways	...	...	...	...	...	...	...	17·68	31·69	...
Jails	...	0·44	0·99	0·44	...	1·31	1·74	1·13	0·99	6·92
Cooly depot	...	...	...	8·12	...	3·70	...	...	...	...

Statement No. III.—Showing particulars of vaccination

District.	Total number of persons vaccinated.		Total number inspected—								Percentage of	
			By Assistant Directors of Public Health or Superintendents of Vaccination.				By native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Superintendents of Vacci	
			Assistant Directors of Public Health.		Superintendents of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.	
	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13
Cuttack	61,463	138,359	4,061	453	8,674	2,138	5,848	1,874	12,421	3,862	6·61	0·33
Balasore	30,900	26,547	...	...	69	150	763	1,465	1,826	1,584	...	...
Puri	32,070	74,866	5,355	760	327	660	...	...	4,273	5,139	16·61	1·01
Sambalpur ...	19,736	43,968	...	...	389	1,043	827	4,757	1,409	4,699	...	...
Angul	5,409	9,492	...	...	...	...	...	...	2,123	3,490	...	...
Khondmals ...	2,290	6,889	66	273	66	274	...	...	396	1,634	2·88	3·96
Ganjam	54,615	1,59,702	406	16	1,199	1,314	11,137	23,289	26,822	54,150	0·74	0·01
Koraput	28,319	42,552	...	...	378	775	16,915	21,781	8,200	6,112	...	...
Total ...	234,802	512,375	9,888	1,502	11,053	6,354	35,490	53,166	57,480	80,670	4·21	0·29

verified by Inspecting Officers during the year 1940.

inspection to total number vaccinated.						Percentage of cases found successful to total number inspected—									
tors of Public Superintendents nation.		By native Superintendents or other Inspecting Officers.				By Assistant Directors of Public Health or Superintendents of Vaccination.				By native Superintendents or other Inspecting Officers.				Percentage of successful cases reported by Vaccinators.	
Superintendents of Vaccination.		District Inspectors and Health Inspectors.		Sub-Inspectors.		Assistant Directors of Public Health.		Superintendents of Vaccination.		District Inspectors and Health Inspectors.		Sub-inspectors.			
Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.	Primary.	Re-vaccination.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
14·11	1·55	9·51	1·35	20·21	2·79	99·77	87·64	91·31	24·55	83·62	37·13	88·64	27·65	98·82	49·35
0·19	0·56	2·47	5·52	5·94	5·96	...	...	100·00	80·00	90·04	44·98	57·84	51·70	99·21	72·04
1·02	0·88	...	...	13·32	6·86	95·07	...	99·08	42·88	...	...	92·25	46·43	97·08	59·89
1·97	2·37	4·19	10·82	7·14	10·69	...	...	93·83	60·98	99·03	61·09	90·28	57·31	99·81	79·08
...	...	...	...	39·25	36·77	...	...	...	...	...	...	99·01	48·02	99·84	60·48
2·88	3·98	...	...	17·29	23·72	100·00	93·77	100·00	58·03	...	...	93·69	70·50	98·67	66·2[illegible]
2·19	0·77	20·39	13·72	49·11	31·91	100·00	100·00	90·58	39·65	98·36	63·60	94·29	38·46	95·37	50·55
1·19	1·82	59·73	51·19	28·95	14·36	...	...	88·16	65·55	97·33	51·18	97·78	43·84	97·43	49·60
4·71	1·24	15·11	10·38	24·48	15·74	97·24	91·28	93·76	42·11	95·35	56·84	92·30	41·28	97·83	55·02

STATEMENT No. IV.—*Showing side by side the ratios per mille of population of deaths from smallpox*

District.	1931-32.		1932-33.		1933-34.		1934-35.	
	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
1	2	3	4	5	6	7	8	9
Cuttack	0·44	27·64	1·14	21·24	3·30	20·76	2·20	23·55
Balasore	0·13	40·02	0·40	44·92	1·09	35·10	0·54	41·46
Puri	0·26	44·41	1·87	47·29	4·38	57·07	2·06	59·83
Sambalpur	1·40	30·28	1·31	23·60	0·72	24·34	1·18	26·26
Angul	...	39·90	0·07	36·22	0·01	56·76	0·28	57·24
Khondmals	...	39·50	...	36·56	0·01	63·39	0·24	56·59
Ganjam	0·06	31·74	0·06	41·43	0·06	52·30	0·04	42·24
Koraput	0·05	38·48	0·04	36·44	0·03	36·69	0·12	30·93
Total ..	0·21	32·83	0·72	33·46	1·23	36·12	1·11	34 64

and the ratios of successful vaccinations per mille of population during the ten years ending 1940.

1935-36.		1936-37.		1937-38.		1938-39.		1939-40.		1940.	
Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of succesful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.	Ratio of deaths from small-pox.	Ratio of successful vaccination per mille of population.
10	11	12	13	14	15	16	17	18	19	20	21
1·12	24·13	0·27	22·38	0·16	22·38	0·06	20·04	1·82	33·51	0·54	33·26
0·29	48·96	0·41	39·92	0·55	41·35	0·05	34·82	0·18	40·10	0·42	42·06
0·66	24·25	0·17	32·97	0·06	39·99	0·06	37·59	0·21	48·46	0·63	47·11
0·34	27·30	0·25	33·94	0·01	39·28	...	104·19	0·12	63·25	0·25	29·85
0·05	61·73	...	35·22	...	40·15	0·01	101·02	0·04	52·69	0·06	66·06
0·06	27·99	1·22	36·52	0·63	35·24	0·05	47·22	...	67·93	...	74·30
0·09	41·25	0·29	58·66	0·26	60·82	0·23	49·78	0·14	65·64	0·26	77·28
0·26	40·40	0·33	45·56	0·10	39·21	0·22	38·49	0·01	37·15	0·14	40·05
0·64	32·89	0·29	45·45	0·19	46·35	0·11	47·74	0·59	46·94	0·38	46·05

STATEMENT NO. V—*Showing the protection afforded to infants in each town in the Province of Orissa during the year 1940.*

District.	Towns.	Number of births during the year ending 31st March 1940.	Number of deaths amongst infants under one year during the year ending 31st March 1940	Number of successful vaccinations amongst infants under one year during the year ending 31st March 1940.	Date of extension of vaccination Act to town.
1	2	3	4	5	6
Cuttack ...	Cuttack ...	2,229	339	184	1st September 1884.
	Kendrapara ...	382	99	105	7th February 1888.
	Jajpur ...	226	28	3	Ditto.
	Total ...	2,837	466	292	
Balasore ...	Balasore ...	305	64	136	7th February 1888.
Puri	Puri	1,121	225	100	Ditto.
Sambalpur ...	Sambalpur ...	345	51	188	7th March 1895.
Ganjam ...	Berhampur	1,680	242	272	24th June 1921.
	Parlakimedi ...	712	104	452	Ditto.
	Total ...	2,392	346	724	
	Total for the Province	7,000	1,152	1,440	

ANNEXURE II.

ANNEXURE

Provincial statement showing the different kinds of lymph

District.	Primary vaccination.											
	Direct from calf.					With lanoline or glycerine lymph.					Arm-to-arm	
	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.
1	2	3	4	5	6	7	8	9	10	11	12	13
Cuttack	...	...	...	...	...	61,468	57,828	691	2,949	98·82	...	...
Balasore	...	...	...	...	...	30,900	29,897	226	777	99·21	...	...
Puri	...	...	...	...	...	32,070	24,525	789	6,796	97·08	...	...
Sambalpur	...	...	...	...	...	19,736	19,188	87	511	99·81	...	...
Angul	...	...	...	...	...	5,409	5,280	8	121	99·84	...	...
Khondmals	...	...	...	...	...	2,290	2,158	29	108	98·67	...	...
Ganjam	...	...	...	...	...	54,615	47,168	2,288	5,159	95·87	...	...
Koraput	...	...	...	...	...	28,319	24,382	641	3,296	97·48	...	...
Total ...	...	...	...	...	...	2,34,802	2,10,426	4,659	19,717	97·83	...	...

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II.

used and their rates of success during the year 1940.

vaccination.			Re-vaccination. Direct from calf.					Re-vaccination. With lanoline or glycerine lymph.					Re-vaccination. Arm-to-arm vaccination.				
Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.	Total.	Successful.	Unsuccessful.	Unknown.	Percentage of successful cases.
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
...	...	...	...	...	...	...	...	1,83,359	14,617	15,001	1,08,738	49·35	...	...	...	...	...
...	...	...	...	...	...	...	...	26,547	11,764	4,477	10,306	72·04	...	...	...	...	...
...	...	...	...	...	...	...	...	74,866	24,233	16,228	34,405	59·89	...	...	...	...	...
...	...	...	...	...	...	...	...	48,968	12,625	8,339	28,004	79·08	...	...	...	...	...
...	...	...	...	...	...	...	...	9,492	3,998	2,612	2,882	60·48	...	...	...	...	...
...	...	...	...	...	...	...	...	6,889	3,960	2,022	907	66·20	...	...	...	...	...
...	...	...	...	...	...	...	...	1,69,702	73,021	71,417	25,264	50·55	...	...	...	...	...
...	...	...	...	...	...	...	...	42,552	14,215	14,437	13,900	49·60	...	...	...	...	...
...	...	...	...	...	...	...	...	5,12,375	1,58,433	1,29,[illegible]86	2,24,406	55·02	...	...	...	...	...

No. 1404-L.S.-G.

GOVERNMENT OF ORISSA

HEALTH AND LOCAL SELF-GOVERNMENT DEPARTMENT

RESOLUTION

The 7th April 1942

During the year under report the provincial birth-rate was 35·85 per *mille* against 34·92 in the previous year and the death-rate 24·72 per *mille* against 28·18 in the preceding year. This improvement is mainly attributable to the reduced incidence of the principal epidemics of cholera and malaria and to better agricultural production. The rates of birth and death, however, continued to be higher in the rural than in the urban areas.

No satisfactory progress has yet been made in the matter of ensuring accuracy in the collection and registration of vital statistics; but a definite improvement in the position has been effected in the urban areas as a result of transfer of the responsibility of registration work from the police to most of the municipalities in North Orissa. The question of unifying and improving upon the diverse system of registration of vital statistics is engaging the attention of Government.

The rate of infant mortality during the year under review was lower than in the previous year. Government recognise that the maternity and child-welfare work carried on at different centres is partly responsible for the reduced mortality figures. They trust that the local bodies in the province will realise their responsibility in this important matter of public health and extend the scope of these welfare institutions within their respective jurisdictions and that the public will extend their benevolence to such useful organisations so that at no distant date there will spread over the country a network of maternity and child-welfare centres to ameliorate the conditions of expectant mothers and babies.

Government are constrained to observe that the premier municipality of Cuttack has ceased to contribute its previous annual donation for upkeep of the local maternity centre and they believe that the municipality will reconsider its attitude and revive the help which it used to render before. Government note with pleasure that the centre at Russelkonda competed successfully for the Imperial Baby Week Challenge Shield Competition conducted by the National Baby Welfare Council, London, and was awarded a special certificate for getting the fourth place in the Empire.

Anti-malarial operations subsidised by grants from Government were continued at different centres in the province. Interesting results were obtained from the research carried on the Chilka lake by the filed unit deputed by the Malaria Institute of India.

The investigation into the life-history of the weeds in the Chilka lake was continued under the supervision of Mr. P. Parija, M.A., I.E.S., and the Indian Research Fund Association though unable to pay anything during the year under report agreed to meet the entire expenditure on the investigation in the subsequent year.

During the year under report the incidence of cholera was much less severe than in the preceding year, the number of deaths from this disease being 3,893 against 11,141. The epidemic continues to be a menace as long as the problem of drinking water-supply is not satisfactorily solved particularly in the rural areas of the province.

The incidence of smallpox was higher than in the preceding year. Absence of a system of universal compulsory vaccination was no doubt partly responsible for this unsatisfactory situation but the upward tendency of this epidemic was also due to the fact that the year 1941 happened to be the peak year of the usual five-year cycle of this epidemic. With the introduction of the recently sanctioned schemes of compulsory vaccination in the coastal districts of North Orissa and in the union areas of Koraput, the incidence of this epidemic may be expected to diminish gradually in subsequent years. Government have under consideration a proposal of having a unified Vaccination Act for the whole province and when the diverse laws are unified and revaccination made compulsory, a further improvement of the situation can also be antiquated.

Preliminary arrangements for the establishment at Cuttack of a model Tuberculosis Clinic have been completed, and with the construction of the building which is well in hand the clinic will begin to function under the Provincial T. B. Officer, already appointed and serve as the foundation of all future developments in the direction of anti-tuberculosis measures in this province.

The anti-leprosy scheme launched by Government has just passed the half way mark of its tentative experimental period of five years, and is reported to have produced excellent results. The four-fold programme of the campaign, viz., survey, propaganda, isolation and treatment, were vigorously pursued. The foundation of a leper colony in Sambalpur, establishment of more treatment centres and appointment of number of lady leprosy relief assistants were the novel features during the year under report.

The treatment of yaws which is widely prevalent in Agency areas received attention which it deserved. During the year under report a scheme of intensive field investigation into the dietetic and nutritional condition of the people was sanctioned by Government and the work was carried on under the direct supervision of the Assistant Director of Public Health. The investigation has distinct possibilities and with the co-operation of the public in the matter of exposing their dietary habits for analysis valuable data can be available for introducing measures to improve the vitality of the people.

The work in the Provincial Bacteriological Laboratory steadily increased and this necessitated strengthening of the laboratory staff. The Orissa Prevention of Adulteration and Control of Sale of Foods Act, 1938 and the Rules thereunder have been enforced but the local bodies have not yet evinced the required amount of enthusiasm to administer the powers entrusted to them in controlling adulteration of foods. Government cannot too strongly impress upon them the imperative necessity of adequately using the salutary powers vested in them by law and thereby securing better standard of food-stuffs for the people entrusted to their care.

The office of the Director of Health and Inspector-General of Prisons was held by Lt. Col. G. Verghese, C.I.E., M.D., Ch.B., D.P.H., D.T.M., I.M.S., throughout the year. Government would desire to place on record that Col. Verghese rendered conspicuous service in the Public Health Administration of the province during the year under review. He devoted himself to the task with marked energy and zeal and carried out his duties most efficiently.

S. DAS

Secretary to Government

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